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# **Análisis de las estrategias de innovación de federaciones deportivas internacionales y de federaciones de tenis nacionales**

**TESIS DOCTORAL**

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Para Delfina, Carlos y Andrés

*“Que inventen, pues, ellos y nosotros  
nos aprovecharemos de sus invenciones”.*  
(Miguel de Unamuno)

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## **ABREVIATURAS**

AGM – Annual General Meeting

BoD – Board of Directors

CSD – High Council for Sports

FIFA – Federación Internacional de Fútbol

F1 – Formula One

IFs – International Olympic Sport Federations – International Federations

IMG – International Management Group

IOC – International Olympic Committee

ITF – International Tennis Federation

NAs – National tennis associations or federations

NPSOs – Non-profit sports organizations

NSFs – National Sport Federations

NSGBs – National Sport Governing Bodies

NSGOs – National Sport Governing Organizations

RAs – Regional tennis associations or federations

RFET – Royal Spanish Tennis Federation

UEFA – Unión Europea de Fútbol

World Athletics – Federación Internacional de Atletismo

World Eugby – Federación Internacional de Rugby



## **PREFACIO**

Esta tesis doctoral se presenta en la modalidad "por compendio de artículos". Por tanto, esta memoria incluye cuatro artículos publicados en revistas indexadas en el Journal Citation Report cuyo autor principal es el doctorando. Para la presentación en este formato el doctorando cuenta con la autorización de los directores de la tesis y de la Comisión Académica del Programa de Doctorado en Administración y Dirección de Empresas pues cumple con los requisitos mínimos en cuanto número e indicios de calidad de las publicaciones para la presentación de la tesis en este formato y los requisitos específicos establecidos por dicho Programa de Doctorado que es al que corresponde la tesis.

Se dispone de la correspondiente autorización de la Comisión Académica del Programa de Doctorado con anterioridad a la presentación de la tesis para evaluación externa. Así mismo, todos los coautores de los artículos presentados son doctores y los resultados publicados en la tesis no se presentarán como parte de otra tesis doctoral. En ningún caso, el contenido de los artículos forma parte de más de una tesis doctoral pues se incluye en su totalidad en esta tesis doctoral.

Para la defensa de la presente tesis doctoral en el formato de compendio de artículos se han tenido en cuenta las políticas editoriales de las diferentes publicaciones en cuanto a la difusión en abierto, dado el carácter público de la tesis doctoral defendida.

Debido a la tipología de la tesis por compendio de artículos, la estructura se ajusta a las siguientes características: este primer capítulo presenta la introducción al estudio y en el segundo los objetivos de la investigación. Seguidamente los siguientes capítulos corresponden a las distintas publicaciones que conforman la misma adaptados al formato de tesis y, por tanto, en la versión del autor. En la primera hoja de cada uno de estos capítulos se hace constar la referencia completa de la publicación. En el caso que nos ocupa, la tesis incluye la totalidad de las publicaciones. Los capítulos finales incluyen la discusión general de los resultados y las conclusiones. La bibliografía de cada artículo aparece al final del capítulo correspondiente y se incluye una bibliografía final relativa al resto de los capítulos.



## **RESÚMENES**

### **Resumen en castellano**

Esta tesis doctoral analiza las estrategias de innovación de federaciones deportivas internacionales y federaciones nacionales de tenis. Se presenta en la modalidad "por compendio de artículos". El primero estudia las percepciones de entrenadores de tenis sobre las estrategias y programas de innovación de la Real Federación Española de Tenis (RFET). El segundo investiga las percepciones de otros grupos de interés (directivos, gestores, árbitros, etc.) sobre la estrategia innovadora y los programas de la RFET. El tercero amplía el ámbito de estudio a los gerentes y personal administrativo de las distintas federaciones de tenis de Latinoamérica. Finalmente, el cuarto, se centra en estudio de la innovación y del crowdfunding en las federaciones deportivas internacionales. Los estudios también analizaron el impacto de la pandemia COVID-19 en la estructura y capacidad innovadora de estas organizaciones. Las hipótesis plantearon la relevancia de una cultura innovadora en estas entidades, la identificación de programas específicos de cada deporte como los más innovadores y el considerable impacto de la pandemia en estas organizaciones. Se diseñó una metodología mixta que incluyó instrumentos cuantitativos (un cuestionario validado) y cualitativos (entrevistas y consulta de información). Los resultados se analizaron utilizando las herramientas estadísticas habituales y, en general, confirmaron las hipótesis planteadas pues se observó una orientación claramente favorable hacia la adopción de estrategias innovadoras y a la implementación de programas específicamente deportivos como los más innovadores. Nuestros estudios concluyen que es fundamental que estas organizaciones adopten las estrategias innovadoras necesarias para seguir mejorando en la generación e implementación de servicios y productos para satisfacer las necesidades de sus grupos de interés.

## Resum en valencià

Aquesta tesi doctoral analitza les estratègies d'innovació de federacions esportives internacionals i federacions nacionals de tennis. Es presenta a la modalitat "per compendi d'articles". El primer estudia les percepcions d'entrenadors de tennis sobre les estratègies i els programes d'innovació de la Reial Federació Espanyola de Tennis (RFET). El segon investiga les percepcions d'altres grups d'interès (directius, gestors, àrbitres, etc.) sobre l'estratègia innovadora i els programes de la RFET. El tercer amplia l'àmbit d'estudi als gerents i al personal administratiu de les diferents federacions de tennis de Llatinoamèrica. Finalment, el quart, es centra en l'estudi de la innovació i del crowdfunding a les federacions esportives internacionals. Els estudis també van analitzar l'impacte de la pandèmia COVID-19 en l'estructura i la capacitat innovadora d'aquestes organitzacions. Les hipòtesis van plantejar la rellevància d'una cultura innovadora en aquestes entitats, la identificació de programes específics de cada esport com els més innovadors i el impacte considerable de la pandèmia en aquestes organitzacions. Es va dissenyar una metodologia mixta que va incloure instruments quantitius (un qüestionari validat) i qualitius (entrevistes i consulta d'informació). Els resultats es van analitzar utilitzant el programes estadístics habituals i, en general, van confirmar les hipòtesis plantejades, ja que es va observar una orientació clarament favorable cap a l'adopció d'estratègies innovadores i la implementació de programes específicament esportius com els més innovadors. Els nostres estudis conclouen que és fonamental que aquestes organitzacions adopten les estratègies innovadores necessàries per continuar millorant en la generació i la implementació de serveis i productes per satisfer les necessitats dels seus grups d'interès.

## **Summary in English**

This doctoral thesis analyses the innovation strategies of international sports federations and national tennis federations. It is presented in the form of a "compendium of articles". The first one studies the perceptions of tennis coaches on the innovation strategies and programmes of the Royal Spanish Tennis Federation (RFET). The second investigates the perceptions of other stakeholders (directors, managers, umpires, etc.) on the RFET's innovation strategy and programmes. The third extends the scope of the study to managers and administrative staff of the different tennis federations in Latin America. Finally, the fourth focuses on the study of innovation and crowdfunding in international sports federations. The studies also analysed the impact of the COVID-19 pandemic on the structure and innovative capacity of these organisations. The hypotheses raised the relevance of an innovative culture in these organisations, the identification of sport-specific programmes as the most innovative and the considerable impact of the pandemic on these organisations. A mixed methodology was designed that included both quantitative (a validated questionnaire) and qualitative (interviews and data collection) instruments. The results were analysed using the usual statistical tools and, in general, confirmed the hypotheses put forward as there was a clear favourable orientation towards the adoption of innovative strategies and the implementation of sport-specific programmes as the most innovative. Our studies conclude that it is essential for these organisations to adopt the necessary innovative strategies to further improve the generation and implementation of services and products to meet the needs of their stakeholders.



# **CAPÍTULO I. INTRODUCCIÓN**





## 1. Delimitación y relevancia del tema

Organizaciones como la Federación Internacional de Fútbol (FIFA) o la Unión Europea de Fútbol (UEFA), World Rugby, World Athletics o la Federación Internacional de Tenis son conocidas fundamentalmente por los eventos que organizan; el Mundial de Fútbol, la Champions League, el Mundial de Rugby, de Atletismo, o la Copa Davis. Estas entidades son las rectoras de sus respectivos deportes en el contexto mundial, mientras que las federaciones nacionales lo hacen en los distintos estados. Entre sus objetivos se encuentra la popularización de sus disciplinas y la obtención de los resultados para sus deportistas.

En este contexto, el lema olímpico "*citius, altius, fortius*" resume el ideario del movimiento deportivo por excelencia: "*más lejos, más alto, más fuerte*", que motiva a federaciones, deportistas y clubes a rendir al máximo para conseguir los mejores resultados en las competiciones. Sin embargo, el éxito deportivo no se mide únicamente a través de los éxitos en el terreno de juego, las medallas, los récords, las copas, las ligas o los campeonatos. También hay que añadir a esto el aumento en el número de practicantes y aficionados, la provisión de productos y servicios, el impacto en los medios de comunicación, la cuenta de resultados, el retorno en la inversión, o la posibilidad de generar valor y de crear una estructura deportiva sostenible mediante el desarrollo eficiente del deporte.

La calidad de los eventos, servicios, productos y programas que ofrecen estas organizaciones es fundamental para alcanzar sus objetivos. Su gestión debe combinar el acceso a financiación de diversas fuentes, como el crowdfunding, y la implementación de sus actuaciones en un marco global, complejo, cambiante e incierto. De ahí la importancia de adoptar las estrategias deportivas y empresariales más modernas y eficientes para ofrecer los servicios y productos que demandan sus usuarios sean deportistas o aficionados.

Y ¿cuál es el proceso que siguen estas organizaciones deportivas para adoptar estas estrategias? Aquí es donde entra en juego la cultura de la innovación en el deporte. Como se observará a lo largo de esta tesis doctoral, el ecosistema deportivo ha implementado ideas o principios novedosos de manera constante. El concepto no es desconocido para el mundo del deporte, pues la aparición de productos, servicios y eventos deportivos ha sido práctica habitual debido a que la industria del deporte ha logrado introducir o adaptar nuevos bienes, sistemas de producción, mercados, fuentes de suministro o estructuras que han situado al deporte como una de las actividades de tiempo libre preferidas por la población.

Los casos de innovación en el ámbito del deporte son numerosos. Por citar algunos de los más conocidos: La implementación del ojo de halcón en tenis, las conexiones wifi en los estadios o el uso del VAR en fútbol serían ejemplos de innovaciones tecnológicas, las nuevas zapatillas Nike Vaporfly o la raqueta de tenis inteligente de Babolat son casos de innovaciones en materiales, mientras que las apps para hacer ejercicio o seguir competiciones son

innovaciones de productos y, de otro lado, la organización de nuevos formatos de competiciones (como el aumento del número de equipos en los mundiales de fútbol, la nueva Copa Davis) o las licencias federativas son ejemplos de innovaciones en servicios. En el contexto actual, la cultura de innovación es crucial para entender a toda organización deportiva. Algunas de estas innovaciones, incluso siendo extremadamente polémicas (recordemos el caso del VAR) no sólo han ayudado a que los deportistas alcancen éxitos en el terreno de juego, sino que han sido fundamentales para que las empresas y las organizaciones deportivas adquieran ventajas competitivas y generen más valor con sus negocios.

Desde una perspectiva organizacional, la importancia de la interacción entre las estrategias innovadoras y el rol fundamental de las federaciones deportivas puede justificar la necesidad de su estudio. Esta relevancia se ha visto impulsada por la comercialización creciente del sector deportivo y las constantes exigencias surgidas de todos los ámbitos: consumidores, aficionados, deportistas, clubes, medios de comunicación, fabricantes, etc. Dicha dinámica ha generado una serie de retos para las federaciones deportivas, que son las organizaciones sin fines de lucro encargadas de gestionar el deporte desde la base hasta el alto rendimiento. Las federaciones, independientemente del contexto en el que operen, deben responder a este reto mediante la adopción de una cultura de innovación que les permita adoptar estrategias para hacer frente a las demandas de un ecosistema claramente más competitivo. La innovación es el motor del cambio, es la fuerza que impulsa a las organizaciones y es el proceso que asegura la adaptación al contexto.

A lo largo de nuestros trabajos citaremos distintas investigaciones realizadas en países como Australia, Bélgica, Canadá o Estados Unidos en las que, por ejemplo, han clasificado a las federaciones deportivas en “*clusters*” según su grado de aplicación de programas innovadores como: federaciones tradicionales, federaciones financieramente viables, y federaciones competitivas. También se han estudiado los aspectos contextuales, organizativos y de gestión que determinan la cultura de innovación de una federación deportiva. Igualmente se han identificado las innovaciones tecnológicas (de materiales, equipamiento y vestimenta), las realizadas en cuanto a servicios (administrativos, de programas, de procesos, las dirigidas a los consumidores) y las de productos (competiciones, juegos, etc.). La cultura de innovación exige el dominio de ciertas competencias por todos aquellos que participan en el proceso de gestión pues se centra tanto en el “*know how*” como en el “*know what*” de las organizaciones. Igualmente se citarán los pocos estudios llevados a cabo sobre el fenómeno del crowdfunding.

En el caso de España, desde hace décadas, posiblemente desde algunos años antes de los Juegos Olímpicos de Barcelona en 1992, el deporte español es un referente en todo el mundo debido a los éxitos cosechados en un contexto de crisis económica y retos sociales. Es, por tanto, necesario saber cuáles son los mecanismos que utilizan federaciones como la Real Federación Española de Tenis (RFET) para gestionar sus actividades. En el caso internacional, las

federaciones internacionales cumplen un papel crucial a la hora de definir el presente e imaginar el futuro de sus deportes. Únicamente mediante el estudio de sus estrategias y programas de innovación podremos saber cómo hacer las cosas mejor y de qué manera es posible lograr el progreso necesario para seguir en los primeros puestos del deporte internacional.

Como ya se ha mencionado y se apreciará en las páginas posteriores, nuestra investigación parte de un cuerpo académico reciente pero considerablemente amplio dedicado al estudio de la innovación en el deporte. Sin embargo, hemos detectado un área no estudiada relativa a los trabajos sobre innovación en organizaciones deportivas en general y, específicamente, en federaciones deportivas nacionales e internacionales. Además, hasta la fecha, el estudio de la innovación en federaciones de tenis ha sido inexistente. Por tanto, este trabajo se enmarca en la corriente internacional de investigación en gestión de la innovación encabezada por profesores como Mathieu Winand de la Universidad Lunex en Luxemburgo o Vanessa Ratten de la Universidad de La Trobe en Australia, e intenta dar un paso más al sumarse a la misma desde diversas perspectivas: nacional, continental e internacional. Nuestra aportación radica en la novedad del estudio en el caso de las federaciones nacionales de tenis y de las federaciones internacionales de los distintos deportes.

Además, el hecho de que esta investigación se haya llevado a cabo durante un período especialmente convulso también para el deporte debido a las medidas tomadas a raíz del COVID-19, la hace muy interesante y oportuna pues las federaciones deportivas han tenido que adaptarse a esta situación. El aplazamiento de los Juegos Olímpicos de Tokio a 2021 y la suspensión de todas las actividades deportivas de cualquier tipo, desde las de alta competición a las de participación en masa, han tenido unas consecuencias imprevisibles en la industria del deporte. Las organizaciones del mundo del deporte en general y las federaciones deportivas en particular han debido adaptar sus estrategias al nuevo entorno y reconocer que lo único cierto, tal y como sucede en una competición deportiva, es que es muy difícil saber el resultado final, pero quien esté mejor preparado será el que tenga más opciones para conseguir la victoria.

Así, el tema de estudio queda delimitado en conocer si las federaciones deportivas analizadas innovan y, si lo hacen, en qué proyectos o programas, cómo llevan a cabo esas actividades innovadoras y cuáles son sus implicaciones y consecuencias deportivas y económicas.

## **2. Justificación del tema**

Varias son las razones por las cuales se ha elegido el tema de la innovación en las federaciones deportivas como objeto de estudio. Entre ellas cabe citar motivos personales, profesionales y académicos.

Con respecto a los primeros, el deporte en general, y el tenis en particular, han formado parte de mi vida prácticamente desde mi infancia. Empecé jugando con mi hermano en el patio trasero de nuestra casa, luego mis padres nos llevaron

a un club para mejorar nuestro nivel de juego y dedicamos incontables horas a entrenar y a participar en competiciones. Lo que empezó siendo una afición, con el tiempo pasó a ser una profesión de manera que la dedicación fue prácticamente a tiempo completo con entrenamientos, viajes y campeonatos. Jugué al tenis profesional durante unos años, aunque afortunadamente fui capaz de continuar con los estudios. En mi caso, la combinación de la raqueta con la carpeta funcionó pues la multi-tarea me ayudó a mejorar en sendas facetas. Tras dejar de jugar al tenis de competición, me formé como entrenador, alcanzando el máximo nivel de titulación, Profesor Nacional de Tenis y empecé a trabajar como entrenador en el Club de tenis Las Vegas y en el Club de Tenis Valencia. Además, fui árbitro internacional de tenis en torneos ATP, WTA y Copa Davis y trabajé como técnico y entrenador en la Federación de Tenis de la Comunidad Valenciana y la Real Federación Española de Tenis (RFET). Seguidamente desempeñé el cargo de director del Área de Docencia e Investigación de la RFET encargado de impartir los cursos de formación y certificación para entrenadores de toda España. Tras unos años, entré a formar parte del Departamento de Desarrollo de la Federación Internacional de Tenis en calidad de responsable de los programas de participación y formación de la esta organización en la que llevo más de 20 años. Sigo jugando con mis hijos cuando tenemos oportunidad y continuamos viajando toda la familia para asistir a torneos y disfrutar de la experiencia del tenis que nos ofrecen los grandes campeones y las estrellas en ciernes. El tenis sigue siendo una parte importante de mi vida y le estoy muy agradecido por ello.

Por lo que hace referencia a los motivos profesionales, mi trabajo en el mundo del tenis ha estado siempre dirigido a ayudar a algunos de los denominados “*stakeholders*”. Como entrenador, la razón fundamental de mi dedicación se centraba en contribuir a mejorar tanto el rendimiento como la satisfacción de los jugadores. De ahí que me interesaran aspectos relacionados con el rol del entrenador de tenis, los conocimientos y competencias que debía tener y las estrategias, sistemas y métodos de entrenamiento que deben seguirse para crear los contextos de rendimiento adaptados a las capacidades de cada jugador. En mi trabajo como tutor, profesor de entrenadores y formador de tutores, el motivo que impulsaba mi dedicación se centraba en comprender mejor los mecanismos que facilitan tanto la adquisición como la transmisión eficiente del conocimiento y como un tutor puede convertirse en un verdadero facilitador del aprendizaje y del desarrollo de otros colegas entrenadores. Finalmente, por lo que hace referencia a mi dedicación como responsable de participación y educación del programa de desarrollo de la ITF, mi contacto diario con las federaciones nacionales e internacionales ha supuesto que estas organizaciones deportivas sean parte de mi “ADN profesional” y, en ese contexto, me interesa especialmente ayudarles a mejorar su gestión, a crear estructuras sostenibles y eficientes, para lo que me parece imprescindible investigar las distintas estrategias que utilizan para implementar sus programas, plasmar sus visiones y alcanzar sus resultados. Y hasta qué punto estas estrategias incluyen la innovación como parte de su plan de negocio. En mi opinión es un tema apasionante. Sigo emocionándome cuando jugadores,

entrenadores o federaciones mejoran y consiguen logros en sus respectivos contextos.

Finalmente, en cuanto a las razones académicas que motivan la realización de este trabajo, obedecen al hecho de que la pasión por el tenis me ha acompañado igualmente en mi trayectoria docente e investigadora. Mi primera tesis doctoral, realizada en el ámbito de la psicología del deporte, se centró en el rol del entrenador de tenis y, más especialmente, en sus capacidades de liderazgo para facilitar un rendimiento y una satisfacción óptimas en sus jugadores. En cuanto a la segunda, circunscrita al campo del derecho contractual en el deporte, su objetivo fue estudiar las denominadas cláusulas de moralidad en los contratos de patrocinio deportivos originadas por las conductas de algunos deportistas. Por lo que se refiere a esta tercera, realizada en el ámbito de la administración y dirección de empresas, pretende ser una contribución al conocimiento de la innovación y del crowdfunding en federaciones deportivas nacionales e internacionales, con una atención especial a las federaciones de tenis.

Nuestro estudio, por tanto, constituye una novedad debido a que, a pesar de la relevancia de estas organizaciones en el contexto internacional y sus contextos nacionales, es la primera vez que se lleva a cabo una investigación de este tipo con federaciones deportivas españolas, con federaciones nacionales de tenis y con federaciones internacionales de los distintos deportes. Ahí reside, en nuestra opinión, la novedad del tema, lo adecuado de la oportunidad y la relevancia y el impacto de los posibles resultados y conclusiones que se esperan alcanzar. La investigación pretende cubrir ese vacío de conocimiento en el campo de la gestión deportiva de este tipo de organizaciones.

Además de las correspondientes conclusiones científicas y académicas, esta investigación también tiene una serie de beneficios y unas implicaciones prácticas pues pretende proporcionar en una etapa posterior unos contenidos precisos, tangibles y prácticos a las federaciones deportivas. De esta forma, serán capaces de conocer en mayor profundidad sus estrategias innovadoras y puedan establecer programas de formación de emprendedores y de difusión de los programas que les ayuden a consolidar las mismas y lograr políticas de gestión eficientes y sostenibles.

En un contexto de cambio rápido y constante como el deportivo, la innovación y la adaptación son cualidades fundamentales para todas las organizaciones, también para las federaciones deportivas. Las estrategias de innovación se han convertido en un aspecto crucial para las federaciones deportivas que quieren ser competitivas para alcanzar éxitos deportivos y conseguir una solidez económica. Este estudio contribuirá a conocer mejor los mecanismos que subyacen a estas estrategias.

### **3. Estructura de la tesis**

Tal y como se ha explicado en el prefacio, la tesis que se presenta lo hace siguiendo la modalidad de compendio de artículos. Como tal, y según lo establecido en la normativa al respecto, debe incluir un capítulo introductorio en el que se delimita el tema, se aportan las razones para su elección y se presenta un panorama general sobre la materia de estudio. En concreto se define el concepto crucial de la investigación, la innovación, y se enmarca en el contexto del deporte incluyendo los marcos teóricos más utilizados y las investigaciones más relevantes. Todo ello evitando repetir los contenidos que aparecen en las introducciones teóricas de cada uno de los cuatro artículos que se incluyen tras la introducción y forman parte de los siguientes capítulos de esta obra.

Cada capítulo contiene un artículo en el formato establecido y con su consiguiente bibliografía. Los cuatro artículos, al haber sido publicados en revistas JCR en inglés están escritos en esta lengua. Cada uno de ellos corresponde a una investigación específica dentro del mismo proyecto.

Finalmente, los últimos capítulos corresponden a la discusión y las conclusiones. En ambos, tal y como se ha hecho para la introducción, se evita repetir conceptos mencionados en los capítulos precedentes y se profundiza en la comparación entre estudios y en conclusiones, limitaciones, aplicaciones prácticas y consideraciones que abarca todo el proyecto. Como es habitual, la bibliografía correspondiente a la introducción y a los dos últimos capítulos cierra la presente obra.

### **4. Innovación: definición, importancia y principales características**

Al igual que ocurre con otros constructos complejos como el liderazgo o la motivación, no existe una definición única para la innovación. No se trata de un vocablo nuevo, pues se encuentra ya en latín ("*innovatio*") como expresión relacionada con la acción de renovar algo (Lewis y Short, 2020). Siglos después Schumpeter la conceptualizó inicialmente en el ámbito empresarial, y poco a poco ha ido cambiando y adaptándose a diferentes contextos convirtiéndose en un término utilizado de forma muy amplia. Tjørndal (2017) afirmó que existen más de 60 definiciones de innovación que abarcan muchos campos académicos. Esta definición relacionada con la introducción de nuevos objetos, tecnologías o ideas que instigan la progresión y el cambio puede complementarse con la propuesta por Damanpour y Schneider (2009) quienes también consideraron la innovación como un subconjunto del cambio organizativo y la definieron como "*el desarrollo (es decir, la generación) y/o el uso (es decir, la adopción) de nuevas ideas o comportamientos*" (p. 496).

La innovación es un término ampliamente utilizado en prácticamente todos los ámbitos de nuestra sociedad entre los que destacan la empresa, la economía, la educación, la cultura, la política, la salud y el deporte. Los estudios académicos sobre las organizaciones han dedicado una atención considerable

a diferentes campos que van desde la sociología hasta la gestión y el liderazgo, la administración de los sectores público y privado, el espíritu empresarial, el desarrollo y muchos otros (Camisón, Boronat y Segarra, 2007).

La innovación se considera un tema muy relevante por la teoría organizativa. El aspecto crucial que debería estar presente en todas las empresas parece ser la comprensión del cambio constante en el que está inmersa la sociedad. Las continuas demandas en todos los sectores crean retos cada vez mayores a los que hay que hacer frente. El rol de la innovación es impulsar a las organizaciones a evolucionar desde las prácticas actuales a las futuras y a adaptarse a esta evolución creando y adoptando nuevas soluciones a los escenarios sin precedentes que puedan surgir (Wolfe, 1994).

La expresión “estrategia de innovación” hace referencia al compromiso de una determinada organización en el desarrollo de ideas que impliquen una determinada planificación y previsión que tengan el objetivo de implementar prácticas innovadoras. Por lo tanto, es crucial para la adopción exitosa de innovaciones (Ratten, 2016). En este contexto, la innovación puede entenderse como un proceso o una serie de eventos que abordan diferentes etapas de adopción según algunos autores (Zaltman et al., 1973), desde la iniciación y la generación hasta el desarrollo, la comercialización, la adopción, la implementación y la terminación (Pajoutan y Seifried, 2014). En este sentido, se trataría de un proceso diferente a la invención porque, aunque ambos términos se refieren a una discontinuidad con el pasado, la innovación va más allá del laboratorio e implica la introducción en las actividades organizativas o en el mercado (Ringuet-Riot, Hahn, y James, 2014). La literatura organizativa ha tratado ampliamente el proceso de innovación y le ha proporcionado una relevancia considerable (Damanpour, 2020).

Este proceso también se entiende como una progresión a través de las diferentes formas o tipos de innovaciones que han sido ampliamente identificadas por las investigaciones y que incluyen algunas como: las tecnológicas (nuevas herramientas, técnicas, dispositivos mecánicos o sistemas), administrativas o de gestión (cambio en la asignación de recursos, en las estructuras de las tareas o en otras funciones de gestión como la práctica, el proceso, la estructura o la técnica de gestión) y auxiliares (nuevas tareas realizadas fuera de la organización interna. Para una revisión y crítica, véase Damanpour (2020), que distingue entre producto-proceso y técnico-no técnico. Hay muchos determinantes que influyen en la propensión de una organización a innovar. Estos son: los de gestión (relaciones individuales y liderazgo), los de organización (tamaño y financiación) y los del entorno (presiones externas) (Damanpour y Schneider, 2006).

Otro ámbito de análisis del proceso de innovación es el estudio de los factores que determinan la receptividad a la innovación, tal y como sugieren Wolfe, Wright y Smart (2006). Se trata de la radicalidad (la novedad, la diferencia y el impacto percibidos de la innovación en relación con el “*statu quo*”, que diferencia entre las innovaciones radicales y las incrementales), la magnitud (la

cantidad de cambios estructurales, de personal y financieros que la innovación implica para la organización), la omnipresencia (la proporción de personas de una organización que se ven afectadas por la adopción de una innovación) y la incertidumbre (el grado de conocimiento sobre la relación entre los insumos, los procesos y los resultados de una innovación).

Las investigaciones también han identificado y clasificado las causas y orígenes de la innovación en cuatro grupos o niveles: ambiental (externo y contextual), organizativo (interno y estructural), individual (personal) y de innovación (diferencias percibidas). Además, la apertura a la innovación, entendida como el grado en que una organización implica a actores externos en el proceso de innovación, en contraposición a la innovación cerrada, también ha recibido el interés de los investigadores (Damanpour, 2020). Al estudiar el constructo de la innovación desde múltiples perspectivas y en diferentes disciplinas, autores como Damanpour y Schneider (2006) han señalado que la novedad parece ser la única característica constante. Otras investigaciones también han identificado la idea de proceso y de origen múltiple como otros elementos cruciales de este concepto (Damanpour, 2020).

## **5. Innovación y deporte**

Innovación y deporte van estrechamente unidos. De hecho, autores como Coakley (2021) se han preguntado como el deporte ha sido capaz de alcanzar unas cotas de relevancia en la sociedad actual que lo sitúan entre las actividades más reconocidas y que ha traspasado los límites de la actividad física para adentrarse en el contexto de la cultura del entretenimiento, hasta convertirlo en una industria y un negocio. Así, Cave (2015) afirma que las transmisiones televisivas de eventos deportivos, la globalización de deportes como la Fórmula Uno y el reconocimiento de los deportistas como estrellas en deportes como el tenis y el golf han sido innovaciones que han contribuido de manera crucial a que el deporte capture los corazones, las mentes y los bolsillos de la sociedad contemporánea.

En este contexto, el deporte se ha beneficiado de la aparición de individuos emprendedores que han logrado generar un enorme valor a la industria mediante la aplicación de procesos innovadores constantes. Entre ellos cabe destacar a fabricantes de material deportivo como Phil Knight (Nike) o Adi Dassler (Adidas), propietarios de grupos de comunicación como Rupert Murdoch (SkyNews), fundadores de empresas de representación de deportistas como Mark McCormack (IMG), presidentes de organizaciones deportivas como Juan Antonio Samaranch (COI) o Philippe Chatrier (ITF), organizadores de competiciones como Bernie Ecclestone (F1) o Carmelo Ezpeleta (Motociclismo) o deportistas como Michael Jordan o Roger Federer.

Las ideas innovadoras de estos individuos han sido capaces de generar una industria que, en 2022 intenta recuperarse de las consecuencias de la pandemia y del impacto de la guerra en Europa. Las previsiones con relación al mercado mundial del deporte informan de un crecimiento desde los 354.960 millones de



dólares en 2021 a 501.430 millones de dólares en 2022, lo cual supone una tasa de crecimiento anual compuesta del 41,3%. Las causas de este se explican por la reordenación de las operaciones empresariales que supondrá una recuperación tras el COVID-19. En 2026 se espera que el mercado mundial del deporte alcance los 707.840 millones de dólares, con una tasa de crecimiento anual del 9% (Business Wire, 2022). La industria del deporte está creciendo a un ritmo mucho mayor que el del producto interior bruto de la mayoría de los países. El deporte se ha extendido más allá de los campos de juego o de los estadios y alcanza patrocinios, derechos de emisión, equipamiento, material, infraestructuras, productos con licencia, generación de contenidos y espectáculos en directo.

Las tendencias apuntan a un flujo de ingresos proveniente de nuevas fuentes junto con el uso más amplio de tecnologías emergentes y un interés gradual en ámbitos sociales más diversos al tiempo que se busca una conexión más profunda con los aficionados (Deloitte, 2022). En este sentido, las innovaciones en el deporte se dirigen a una combinación gradual entre los mundos real y virtual facilitada por la relevancia de la captura y el análisis de datos, los “*esports*”, las tecnologías inmersivas, el “*blockchain*” o las apuestas en línea. Todo ello concentrará más, si cabe, la atención de la sociedad sobre el papel del deporte ante los retos emergentes relacionados con la gobernanza, la sostenibilidad, o la salud de la población.

Estas tendencias impulsadas por los emprendedores y sus innovaciones pueden generar nuevas oportunidades y desafíos ante los que las organizaciones deportivas (federaciones, asociaciones, ligas, clubes, medios, etc.) y las personas (deportistas, organizadores, aficionados, periodistas, etc.) han de adaptarse para proporcionar las respuestas adecuadas.

Desde una perspectiva sociológica, el deporte se ha posicionado como un instrumento que puede tener un papel crucial en la percepción de personas, organizaciones, colectivos y países. Como afirman Habitzreuter y Koenigstorfer (2021) las estrategias de marketing de las grandes empresas que se asocian con el deporte buscan un mayor reconocimiento a través de los valores que transmiten todos aquellos que están relacionados con este. Cuando surgen algunos escándalos como los protagonizados por grandes campeones como Lance Armstrong, Tiger Woods, Oscar Pistorius, Manny Pacquiao o algunos otros, las alianzas entre deporte y empresa se ven afectadas por el ataque a los principios y valores que se pretenden defender (Crespo, 2019).

Por otro lado, el uso del deporte como instrumento de desarrollo en el mundo ha sido una constante tanto en los programas de federaciones (Browsers, 2013) como de gobiernos e instituciones (Spaaij y Schaillée, 2021). En este contexto, el deporte apoya el principio de cambio positivo, desarrollo y paz alineándose con los objetivos del milenio. Como indican Skinner et al. (2018) “*El deporte puede inspirar pasión y a las personas; implica marketing y dinero, apoya las ideologías y la identidad, fomenta la comunidad, mejora el perfil y la profesionalidad, y genera patrocinio y simbolismo*” (p. 4).

Las prácticas innovadoras de los líderes y emprendedores del deporte han conseguido avanzar en su profesionalización, transparencia, integridad y globalización. El deporte como negocio está más focalizado que nunca en proporcionar una experiencia valiosa a todas las partes implicadas, pero especialmente a los deportistas y a los aficionados. La innovación y los innovadores pueden extender su cultura y prácticas de tal forma que impulsen al deporte a convertirse en un instrumento para el progreso y desarrollo comercial, cultural y social.

## **6. Tipos de innovación en el deporte**

Los investigadores han señalado varios tipos de innovación en el deporte. Así, Potts y Ratten (2016) diferenciaron entre innovaciones de servicio (la forma de ver el deporte), de producto (el equipamiento o la ropa), las tecnológicas (materiales, procesos de información, reglamentos, etc.) y las administrativas (servicios para el cambio institucional). En este sentido, Tjørndal (2017) también identificó las siguientes: sociales (problemas sociales que requieren soluciones nuevas y creativas), tecnológicas (avances en la tecnología), comerciales (participación de las empresas en la creación de cambios en el deporte), comunitarias (asociaciones con las comunidades locales) y organizativas (proyectos de cambio institucional).

Las innovaciones tecnológicas como el uso de “*big data*” para mejorar la experiencia de los aficionados y aumentar el rendimiento de los deportistas, la utilización de nuevos materiales para la fabricación de equipos en diferentes niveles de práctica, y la creación de webs, plataformas, videojuegos y apps para facilitar la participación de jugadores e involucrar más a los aficionados, entre otras, son algunas de las principales innovaciones en el ámbito deportivo. Estos cambios en la tecnología también han dado lugar a nuevas disciplinas deportivas como los deportes extremos y los deportes electrónicos o “*esports*” (Ratten, 2011).

Hay muchas personas y organizaciones que impulsan la innovación en el deporte. Este fenómeno se produce a través de organizaciones como federaciones, asociaciones, comunidades, clubes y equipos, y a través de individuos como jugadores, administradores, entrenadores, gerentes, directivos, voluntarios y aficionados. Las acciones de personalidades, empresas y organizaciones deportivas han incrementado los aspectos sociales de la innovación al fomentar el cambio social a través de la participación en el deporte. Los denominados “campeones de la innovación” son los individuos que lideran el proceso de cambio de las diferentes organizaciones tal y como sostienen Winand, Qualizza, Vos, Scheerder y Zintz (2013). Para que una innovación se considere un éxito, además de su utilidad y su aceptación por parte de los usuarios y del mercado, es fundamental que se mantenga en el tiempo (Greenhalgh, Dwyer y Biggio, 2014).

Tal y como sostienen Wemmer y Koenigstorfer (2016) la innovación abierta se ha considerado una modalidad de innovación considerablemente popular en el deporte ya que algunos de los procesos de innovación han supuesto la participación de usuarios, como los aficionados o los deportistas. Estos colectivos han sido utilizados por las organizaciones deportivas innovadoras para desarrollar nuevos equipos o mejorar sus experiencias no solo en organizaciones deportivas con ánimo de lucro, sino también en aquellas que no lo tienen.

Otros autores como Desbordes (2002) igualmente han hecho hincapié en las fuentes de innovación en el deporte. Así, consideran que la innovación interna se aplica por parte de los clubes y las empresas deportivas para reducir el gasto de los procesos que llevan a cabo, mientras que la innovación externa se produce mediante redes interorganizativas y clusters y, en ese contexto también se ha mostrado como una alternativa viable (Desbordes, 2001; Newell y Swan, 1995).

Un área clave estrechamente relacionada con la innovación deportiva que ha ganado una considerable atención es la de la existencia de un espíritu empresarial en el deporte (para una amplia revisión, véase Ratten, 2020). En este nuevo campo, la innovación se considera una parte esencial y una de las principales características del espíritu empresarial en las organizaciones deportivas con y sin ánimo de lucro, junto con la asunción de riesgos y la proactividad (Ratten, 2011).

Un concepto muy interesante debido a su amplia perspectiva es el de la existencia de culturas innovadoras, mencionado por autores como Skinner, Smith y Swanson (2018). Estos investigadores enfatizan la importancia del fomento de las culturas innovadoras en el deporte mediante una serie de estrategias entre las que se incluyen el apoyo a los liderazgos innovadores, el mapeo de los procesos innovadores que permita la identificación de la existencia de oportunidades para innovar, de la creación y la habilitación de empresas generadoras de innovación, y el crecimiento de una cultura de la innovación que nutra las ideas, inspire las mentes y cree el futuro.

Ciertamente, como afirma Ratten (2020), las innovaciones tienen una relevancia crucial en el ecosistema deportivo debido a que están modificando la forma de organizar, gestionar, practicar y consumir el deporte. Los diferentes tipos de innovaciones tienen un impacto considerable en los diversos componentes del contexto relacionado con el deporte. Las nuevas tecnologías, los sistemas utilizados y las estructuras generadas siguen influyendo en la innovación en el deporte al generar soluciones novedosas para los retos existentes y futuros.

Autores como Ringuet-Riot, Hahn y James (2014) diferenciaron además entre la generación de una innovación (es decir, un nuevo producto o proceso para resolver un problema) o la adopción de una innovación (es decir, actividades para fomentar el uso de una innovación ya existente en otro lugar). Por su parte, Tjørndal (2017) consideró que las innovaciones que se producen con mayor

frecuencia en las organizaciones deportivas son los cambios descritos como "mejora", "reforma" o "nuevas ideas" que implican el uso de nuevos conocimientos para cambiar los productos, procesos, servicios o tecnologías existentes. Sin embargo, para un ejemplo de la aplicación de una innovación radical en la gestión de los recursos humanos en la Major League Baseball, véase Wolfe, Wright y Smart (2006).

## **7. Modelos y marcos conceptuales de la innovación en el deporte**

Desde el punto de vista teórico, existen varios modelos y marcos conceptuales que intentan explicar y estudiar mejor la innovación en los entornos deportivos. Estos modelos suelen basarse en la teoría general de la innovación y en una síntesis de los marcos teóricos y metodológicos más conocidos. Algunos de los marcos teóricos que se presentan a continuación son especialmente relevantes para nuestro estudio porque se centran en las estrategias, procesos y programas de innovación llevados a cabo en la organización y la gestión del deporte por parte de los órganos de gobierno que operan en los distintos niveles de gestión, pero fundamentalmente, nacional, que es uno de los objetivos de nuestro trabajo.

Fueron Newell y Swan (1995) quienes crearon el primer marco para la comprensión de los procesos de innovación en el contexto de las organizaciones deportivas. Este modelo hacía hincapié en la importancia de las redes interorganizativas y los procesos de cambio, como la difusión y la traslación, en torno a la innovación y los resultados del cambio. El modelo no abarcaba varias características estructurales de la innovación (es decir, los tipos o la estructura y el tamaño de la organización), que son cruciales, pero asumía que tendrían un impacto en el proceso de innovación.

Desde una perspectiva más específica, Hoeber y Hoeber (2012) y Greenhalgh et al. (2014) adaptaron al contexto deportivo el marco conceptual general sobre las tres etapas del proceso de innovación desarrollado originalmente por Damanpour y Schneider (2006). Estas etapas son la iniciación (reconocimiento del problema, generación de soluciones y consideración de posibles innovaciones), la adopción (evaluación y decisión sobre la innovación) y la implementación (modificación, preparación y distribución a sus usuarios). El líder de la innovación, la actitud organizativa, la comunicación externa y los vínculos se identifican como factores determinantes para el éxito de la innovación organizativa deportiva (Flanders, Smith, Jones y Greene, 2020).

Otro modelo de innovación es el propuesto por Winand, Qualizza, Vos, Scheerder y Zintz (2013) relacionado con los campeones de la innovación. Este modelo define a los campeones de la innovación como aquellos individuos comprometidos con el desarrollo y el éxito de una innovación. Wolfe, Wright y Smart (2006) ya mencionaron su importancia en el caso de Moneyball. En ausencia de un campeón de la innovación, es más probable que se abandone el proceso de innovación si surgen problemas (véase Hoeber y Hoeber, 2012;

Greenhalgh et al., 2014; Winand y Anagnostopoulos, 2017; Flanders, Smith, Jones y Greene, 2020 para diversos ejemplos al respecto).

Por su parte, Ringuet-Riot, Hahn y James (2014) desarrollaron un modelo para comprender los nuevos enfoques de innovación tecnológica que se dan en el mundo del deporte, Wemmer y Koenigstorfer (2016) crearon un modelo de innovación abierta en clubes deportivos sin ánimo de lucro y Wemmer, Emrich y Koenigstorfer (2016) profundizaron en esta línea y presentaron un modelo de innovación abierta basado en la “*coopetición*” (cooperación con los competidores).

Autores como Winand y Hoeber (2017) también propusieron un modelo de capacidad de innovación de las organizaciones deportivas sin ánimo de lucro. El modelo identificó cuatro dimensiones que influyen, inhiben o facilitan su capacidad para desarrollar, adoptar e implementar innovaciones. Estas dimensiones eran: estratégica (competidores, organizaciones clave y expectativas de las partes interesadas), del usuario (expectativas de los servicios y participación en el proceso), financiera (recursos monetarios atraídos) y humana (personal remunerado y voluntarios).

Finalmente, Winand y Anagnostopoulos (2017) utilizaron un modelo teórico en el que basar su investigación en el que se aplicaba el concepto de innovación de servicios como mediador y exploraba la relación entre la actitud, la innovación y el cambio producido en la organización deportiva. El modelo se basa en la percepción del personal de las organizaciones deportivas y divide la innovación de servicios deportivos en dos variables mediadoras diferentes: el número de innovaciones de servicios aplicadas con éxito y el grado de innovación de la organización (es decir, su nivel de capacidad de innovación). También entiende el cambio organizativo como un cambio considerable en las actividades, las personas y el funcionamiento de la organización.

Por nuestra parte, la línea de investigación que plantea nuestra tesis doctoral se centra en organizaciones deportivas federativas en los ámbitos nacionales e internacionales. Por tanto, se trata de entidades de naturaleza jurídica privada pero que operan en un contexto público según sea su ámbito de actuación y económicamente sin ánimo de lucro. La evidente complejidad de estas organizaciones en cuanto a su naturaleza, gobernanza, estructura, funciones y operativa añade cierta dificultad a su estudio debido a su carácter único el cual las aleja de las organizaciones deportivas con ánimo de lucro o de otras empresas o entidades orientadas a la obtención de beneficios.

En ese sentido, nuestras investigaciones adoptan por seguir una combinación de los modelos teóricos presentados en los párrafos anteriores y se decantan por utilizar un instrumento de medida de las percepciones de la innovación que acompaña a las propuestas de Winand y colaboradores en sus distintas organizaciones por considerar que se trata de la herramienta que mejor se adapta a las necesidades y objetivos de nuestros estudios.

## **8. Investigación sobre la innovación en el deporte**

La investigación sobre la innovación en el deporte como área de estudio analítica y teórica es relativamente reciente. Sin embargo, durante la última década, el estudio de este campo se ha convertido en una disciplina muy activa y en un área importante de la investigación empresarial. Está ganando rápidamente popularidad, ya que conecta los estudios de gestión de la innovación y la literatura sobre el deporte. Como afirman Ferreira, Fernandes, Ratten y Miragaia (2020) esta relevancia ha producido un aumento considerable del número de publicaciones sobre el tema en revistas académicas.

En cuanto al contexto, las investigaciones sobre la innovación de las entidades deportivas han estudiado diferentes tipos de organizaciones profesionales y sin ánimo de lucro. En el sector profesional ha habido estudios sobre ligas profesionales (Goff, McCormick y Tollison, 2002; Chacar y Hesterly, 2004; Smith y Green, 2020), y clubes profesionales (Gilmore y Gilson, 2007; Mohammadkazemi, Rasekh y Navid, 2016). En el sector deportivo sin ánimo de lucro, los estudios sobre innovación son escasos y se han centrado en las entidades locales (Franke y Shah, 2003; Hoeber y Hoeber, 2012), los institutos deportivos municipales (Pedrosa, 2016), los clubes (Wemmer, Emrich, Koenigstorfer, 2016), las federaciones regionales (Winand, Vos, Zintz y Scheerder, 2013; Winand y Anagnostopoulos, 2017), las TIC y el marketing en redes sociales (Santomier, Hogan y Kunz, 2016), entre otros. Hasta la fecha de nuestras investigaciones no se habían llevado a cabo estudios sobre innovación en federaciones de tenis nacionales ni en federaciones deportivas internacionales.

Las investigaciones sobre la innovación en el deporte han pretendido aplicar algunos de los marcos teóricos previamente mencionados y tuvieron sus orígenes en la relevancia de la promoción de la salud y de la mejora de la calidad de vida de la población mediante el deporte. El área ha sufrido un cambio gradual en el alcance de los temas de análisis de manera que se han incorporado el estudio de aspectos relacionados con la innovación tecnológica, el papel de la información y la comunicación en los procesos innovadores y los retos organizativos que implican las estrategias de innovación en el deporte. De ahí que pueda afirmarse que, como indica Tjørndal (2017), nos encontramos ante un área en constante evolución lo cual constituye un auténtico desafío a la hora de intentar comprender sus características y vislumbrar su futuro. La innovación en el deporte pues, sigue desarrollándose como campo de investigación académica que va consolidándose paulatinamente, ya que los primeros artículos científicos sobre este tema se publicaron en la década de 1990 y el grueso de la investigación sobre esta área de conocimiento se ha publicado después de 2005. En la actualidad, nos encontramos ante un campo extremadamente fértil que se ve abonado constantemente por las contribuciones académicas de estudiosos de todo el mundo y que se amplía progresivamente con aportaciones en ámbitos que facilitan su enriquecimiento. Así entendemos la contribución que llevamos a cabo en esta tesis doctoral.

Como se ha afirmado, la internacionalización y comercialización de la industria del deporte, su diversidad y los cambios constantes que se llevan a cabo en el ecosistema deportivo han contribuido a que la innovación en este contexto gane protagonismo como área de investigación, ya que autores como Ratten (2021) resumen el sentir general de la comunidad investigadora al considerar que el deporte tiene una perspectiva fundamental orientada hacia la innovación. A la hora de estructurar los estudios en innovación deportiva Ferreira, Fernandes, Ratten y Miragaia (2020) la dividen en tres campos principales: el relacionado con la gestión del conocimiento, las investigaciones sobre la tipología de innovaciones y los estudios de carácter eminentemente sociológicos.

En general, coincidimos con estos autores cuando consideran que la mayoría de los temas tratados son muy prácticos y se caracterizan por tener una considerable relevancia aplicada para la industria del deporte. A modo de ejemplo, cabe citar los estudios llevados a cabo en innovación deportiva relacionados con la gestión de eventos y organizaciones, el turismo deportivo en sus diversos ámbitos, la educación de los sujetos involucrados en estas organizaciones (entrenadores, deportistas, voluntarios, gestores, etc.), la tecnología y su aplicación en los distintos ámbitos del ecosistema deportivo, el papel innovador de los medios de comunicación y las redes sociales, y las estrategias de innovación en los eventos deportivos, por nombrar algunos. Como afirma Nová (2004) las investigaciones suelen tener principalmente dos enfoques; aquellas introducidas por las organizaciones deportivas para la mejora de sus procesos o servicios o las innovaciones tecnológicas introducidas, en muchas ocasiones por los fabricantes o las empresas de comunicación, para la mejora del rendimiento en el deporte, su medición y la diseminación de sus contenidos.

De todas las áreas de innovación que pueden distinguirse en el deporte, la innovación tecnológica es una de las que ha recibido una mayor atención por parte de los investigadores. Es obvio que, en el ecosistema del deporte, la tecnología es un motor clave del cambio innovador en cualquier disciplina de élite en lo que respecta al diseño de materiales o equipamientos (Dyer, 2015) y a los sistemas, metodologías, estrategias, prácticas y ayudas al entrenamiento o a la formación (Ringuet-Riot et al., 2013). Además de todas estas aplicaciones de la tecnología al rendimiento deportivo, hay que añadir su gran relevancia en el ámbito de los eventos deportivos como instrumentos cruciales para mejorar la experiencia de los usuarios y de los aficionados. De un lado, el gran ímpetu para innovar en el deporte de élite suele conducir a la adopción temprana de tecnologías nuevas o mejoradas, mientras que la necesidad de proporcionar las mejores experiencias posibles en los eventos deportivos facilita la utilización de tecnologías adaptadas de otros ámbitos o creadas específicamente para la industria del deporte (Buttfield y Polglaze, 2017).

Las innovaciones tecnológicas que se han llevado a cabo en los distintos deportes se han estudiado desde diferentes perspectivas las cuales incluyen aspectos tales como las estructuras generadas, los materiales utilizados, los procesos seguidos y los conocimientos aplicados. A modo de ejemplo, se citan

a continuación, algunos de los estudios sobre innovaciones realizados en distintas modalidades deportivas entre las que destacan, la industria del motor (Pinch y Henry, 1999), el sector del esquí (Desbordes, 2001), el ciclismo, la vela y el snowboard (Desbordes, 2002), el rodeo-kayak (Baldwin, Hienerth y von Hippel, 2006; Hienerth, 2006), el atletismo (Hawley, Gibala y Bermon, 2007; Balmer, Plesence y Nevill, 2012), el kitesurf y el buceo técnico (Schreier, Oberhauser y Pruegl, 2007), los deportes para discapacitados (Jewell, 2008), la natación (Mountjoy, Gordon, McKeown y Constantini, 2009), el voleibol (Ringuet-Riot, Carter, James, 2014), el fútbol americano (Greenhalgh, Dwyer y Biggio, 2014), el snowboard de medio tubo (Harding, Lock y Toohey, 2016), el béisbol y el cricket (Goorha, 2016), el boxeo (Tjønndal, 2018), el baloncesto (Woratschek, Durchholz, Maier y Ströbel, 2017) y el fútbol (Escamilla-Fajardo, Núñez-Pomar, Ratten y Crespo, 2020). Para una visión estructurada de la innovación tecnológica en el deporte, véase Ringuet-Riot, Hahn y James (2014) y para un enfoque relativo a la investigación interdisciplinar, véase Ellapen y Paul (2016).

Otras áreas de la investigación tecnológica en el deporte se han centrado en la innovación realizada por los usuarios (Hyysalo, 2009), la capacidad de innovación de los eventos (Yoshida, James y Cronin, 2013), el uso innovador de las tecnologías de la información (Pajoutan y Seifried, 2014), la innovación de los medios de comunicación y el público (Meese y Podkalicka, 2105), la información innovadora en los eventos deportivos (Petrović, Milovanović, Desbordes, 2015), la difusión de las innovaciones medioambientales (McCullogh, Pfahl y Nguyen, 2016), la innovación en clústeres deportivos (Gerke, 2016), la innovación abierta (Wemmer y Koenigstorfer, 2016), las técnicas de gestión innovadoras (Rexhepi, Ramadani y Ratten, 2018), la innovación en programas de formación universitarios (Flanders, Smith, Jones y Greene, 2020) y las relaciones entre sostenibilidad e innovación (Huertas, Añó y González, 2020) entre otros.

Como sugieren Ringuet-Riot y James (2013), las futuras tendencias de innovación tecnológica en el deporte deben identificar las necesidades de los individuos y las organizaciones en cuanto a dichas innovaciones tecnológicas. Por su parte, Potts y Ratten (2016) han indicado que las investigaciones deberían estudiar las tecnologías y servicios emergentes centrándose en las innovaciones estratégicas desarrolladas en el deporte.

Por lo que hace referencia a la gestión de la innovación en las organizaciones deportivas, los tipos de innovaciones generadas por las federaciones deportivas nacionales e internacionales pueden ser la adopción de un nuevo producto (es decir, un determinado material o equipamiento), un nuevo servicio (es decir, una liga para jugadores senior aficionados), un nuevo proceso o sistema administrativo (es decir, un sistema de clasificación de competiciones), una nueva tecnología (es decir, una app para la inscripción en torneos o la reserva de pistas), o una nueva norma, reglamento o política (es decir, las directrices de prevención del COVID-19) en la organización (Wemmer, et al., 2016). Algunas de ellas pueden implicar ajustes o cambios operativos menores, mientras que



otras (es decir, una nueva estructura de gobierno o actividades de responsabilidad social corporativa) tienen el potencial de cambiar radicalmente la forma en que se organiza, se ve, se juega y se consume el deporte. Todas ellas tendrán como objetivo crecer, satisfacer a sus miembros y cumplir las expectativas de sus partes interesadas y clientes (Newell y Swan, 1995; Hipp y Grupp, 2005; Winand, Vos, Zintz y Scheerder, 2013). En cuanto a los tipos de innovaciones que aportan las NSGB, generalmente se consideran proveedores de servicios en el sector deportivo sin ánimo de lucro, ya que no suelen ofrecer productos tangibles, sino procesos, actividades o programas innovadores, tanto deportivos como no deportivos, puestos en marcha para satisfacer a sus miembros (Winand, Rihoux, Qualizza y Zintz, 2011).

En cuanto a la innovación en las organizaciones deportivas, las investigaciones han sido escasas en comparación con las llevadas a cabo sobre innovación deportiva. Fundamentalmente han abarcado dos tipos de organizaciones; los Organismos Nacionales de Gobierno del Deporte, que supervisan todos los deportes de un país, y las federaciones deportivas nacionales, que se ocupan de un solo deporte. La investigación sobre las organizaciones deportivas se ha centrado en aspectos tales como el desarrollo y la paz (Chawansky, Hayhurst, McDonald y van Ingen, 2017; Svensson, Andersson, Mahoney y Ha, 2020), y la política deportiva (McSweeney y Safai, 2020). Es importante resaltar que, en el momento de llevar a cabo esta tesis doctoral, no se ha encontrado estudio alguno sobre innovación en federaciones deportivas de tenis ni en federaciones deportivas internacionales.

A pesar de que la innovación puede ser útil para hacer frente a los desafíos competitivos a los que se enfrentan las federaciones deportivas, algunas pueden experimentar resistencia al cambio y a la innovación debido a una serie de factores, como el apoyo y el valor de la tradición, la falta de reconocimiento de los beneficios o la necesidad de cambio, la falta de motivación para buscar una ventaja competitiva y la percepción de que el riesgo es mayor que el beneficio. Este escenario también ha definido dos tipos de organizaciones deportivas: las tradicionales/informales frente a las contemporáneas/formales (Winand y Anagnostopoulos, 2017; Flanders, Smith, Jones y Greene, 2020). Las federaciones deportivas tienen características muy distintas y operan en un ecosistema competitivo gradualmente complejo. Se enfrentan a diferentes problemas que desafían su estructura, organización y funcionamiento. Las investigaciones y la experiencia práctica han demostrado que parece ser necesario comprender mejor cómo surge y se desarrolla la innovación en este contexto (Winand et al., 2013).

Centrándose en las direcciones futuras de las innovaciones de gestión en el deporte, Ringuet-Riot y James (2013), se refieren a una "brecha de rendimiento" que este tipo de innovaciones puede abordar mediante la introducción de nuevas estructuras, procesos, técnicas, prácticas y sistemas para proporcionar una ventaja competitiva. Por su parte, Potts y Ratten (2016) también recomendaron estudiar la gestión de la innovación en un contexto de país en

desarrollo o emergente y más investigaciones sobre estudios comparativos acerca de la innovación deportiva en diferentes contextos nacionales.

Se puede concluir que la investigación sobre los diferentes aspectos relacionados con la innovación en el deporte ha recibido una atención considerable y ha ofrecido poderosos conocimientos. Sin embargo, la investigación sobre la innovación en el deporte no está exenta de críticas. Resulta sorprendente que, a pesar de la popularidad, el crecimiento y la importancia del deporte, el aumento de los artículos publicados sobre la innovación deportiva sea muy reciente. Existe un interés fragmentado de la literatura debido a la diversidad de perspectivas disciplinarias, la amplia gama de temas tratados y la variedad de revistas y comunidades participantes. El núcleo de la literatura sobre este campo es inmaduro y aún está en desarrollo, ya que los resultados de la investigación no están conectados de forma sistemática, tienen un enfoque estrecho al aislar varias cuestiones y falta un conocimiento sintetizado. Sigue faltando una comprensión analítica conceptual y aplicada del ámbito de la gestión de la innovación que permita acumular conocimientos. Por otro lado, ha habido poca investigación empírica sobre las estrategias, la gestión y los procesos de innovación, y sobre cómo se diferencian en un contexto deportivo. También se han señalado algunas lagunas importantes en la literatura existente sobre innovación deportiva en términos de teoría, aplicación limitada a nuevos contextos, metodologías mixtas y falta de revisiones de la literatura y de estudios sobre el origen, desarrollo y gestión de la innovación en el contexto de las federaciones nacionales e internacionales (Caza, 2000; Ratten, 2016; Tjønndal, 2017; Ferreira, Fernandes, Ratten y Miragaia, 2020).

Por tanto, la necesidad que abrir una nueva línea de estudio que abarcara las estrategias y programas de innovación de las federaciones deportivas nacionales e internacionales en general, y en el tenis en particular, parece justificada por la falta de investigaciones en este ámbito.

Así, nuestra tesis doctoral se enmarca en una línea de investigación que comprende una serie de estudios que son los primeros que analizan las percepciones de las partes interesadas que forman parte de federaciones deportivas nacionales e internacionales sobre los programas de innovación implementados por sus organizaciones y el impacto que la pandemia del COVID-19 ha tenido sobre los mismos. Además, se explora la percepción del fenómeno del crowdfunding en este contexto.

## **CAPÍTULO II. OBJETIVOS**



El objetivo general de la presente tesis doctoral es estudiar la innovación en federaciones deportivas nacionales e internacionales.

Con tal fin, se ha estructurado la misma en cuatro artículos cuyos objetivos son los siguientes:

El objetivo del primer artículo de la tesis ha sido conocer y comprender el proceso innovador de una federación deportiva nacional, mediante el análisis de la percepción de los entrenadores españoles sobre los diferentes programas que ofrece la Real Federación Española de Tenis (RFET) como parte de su estrategia de innovación.

En relación con el segundo artículo su objetivo fue conocer los programas de innovación de la RFET a través de las opiniones y consideraciones de las distintas partes relevantes en cuanto a organizaciones innovadoras. En concreto, la pregunta de la investigación fue doble. En primer lugar, en qué medida la RFET estaba llevando a cabo innovaciones y cómo las perciben sus partes interesadas. En segundo lugar, el papel que desempeñan en las innovaciones tanto el contexto deportivo general como las características de la RFET.

En cuanto al tercer artículo, su objetivo fue estudiar las estrategias de innovación utilizadas por las federaciones nacionales de tenis latinoamericanas como respuesta a la pandemia del COVID-19 que consideraban más relevantes los gerentes de estas federaciones. Las preguntas de investigación de este estudio fueron las siguientes: ¿cuáles son las actitudes y percepciones del personal profesional ejecutivo de las AN hacia la innovación en esta situación sin precedentes? ¿Y cuáles son las estrategias, los programas o los proyectos más innovadores aplicados durante este periodo?

Por lo que hace referencia al cuarto y último artículo, su objetivo fue contribuir a la comprensión de la innovación y el crowdfunding de las federaciones deportivas olímpicas internacionales (FI), que son los órganos de gobierno mundial de sus respectivos deportes. Se abordaron tres cuestiones de investigación: las percepciones de las FI sobre la aplicación de sus programas de innovación durante los últimos cuatro años (2016-2020), el impacto de COVID-19 en la capacidad de innovación de las FI y las estrategias de crowdfunding de las FI.



### **CAPÍTULO III. COACHES' PERCEPTIONS OF INNOVATION PROGRAMS OF THE ROYAL SPANISH TENNIS FEDERATION**

Crespo, M., Botella-Carrubi, D., & Jabaloyes, J. (2021). Coaches' perceptions of innovation programs of the Royal Spanish Tennis Federation. *International Journal of Sports Science & Coaching*, 16(6), 1293-1304. doi:10.1177/17479541211035556

El presente capítulo incluye una adaptación del artículo para la tesis.





## 1. Title

Coaches' perceptions of innovation programs of the Royal Spanish Tennis Federation

## 2. Abstract

This research studied the coaches' perceptions of the innovation programs of the Royal Spanish Tennis Federation (RFET) during 2016-2020. The RFET is one of the most relevant national federations in Spain both in terms of results at the highest levels of the game as well as in terms of participation and grassroots tennis. Coaches are considered relevant stakeholders of any sport federation due to their role in delivering the sport. A 29-item questionnaire adapted to tennis was completed by 132 certified coaches RFET members which had different years of experience and coached players of various skill levels. Results showed significant differences between the coaches with more than 20 years of experience as they perceived more rivalry between regional federations in the access to grants and more international competitiveness at high-level tennis as compared to their less experienced colleagues. Coaches also considered that the COVID-19 pandemic had negatively affected the innovation strategy and capability of the organization. They identified a grassroots initiative and a coach education project as the two most valued innovative programs implemented by the RFET in the period. These last findings coincide with those from previous research and highlight the relevance of providing coaches with clear player development guidelines and opportunities for continuous professional development through education. It can be concluded that federation leaders should consider the coaches' perceptions on their innovation programs. This will assist them to better provide initiatives that will satisfy their needs and improve the effectiveness of their federations.

**3. Keywords:** innovation, strategy, sport, tennis, federation, coach

## 4. Abbreviations

BoD – Board of Directors  
CSD – High Council for Sports  
ITF – International Tennis Federation  
NSF – National Sport Federations  
NSGBs – National Sport Governing Bodies  
RFET – Royal Spanish Tennis Federation

## 5. Introduction

Played by more than 80 million players worldwide, tennis is one of the most popular sports and, probably, the most popular racquet sport. Apart from being a sports discipline, tennis is a social, cultural, commercial, and artistic activity. For some, it's a profession and for others it's a passion that has to be passed on to future generations<sup>1</sup>. Tennis offers social and competitive opportunities for

players of all ages, genders, and abilities. In the last decades, the tennis ecosystem has become an industry and a relevant actor in the entertainment business. As highlighted by several authors<sup>2</sup> different organizations have vastly increased their financial investment into both high performance and mass participation tennis. The appeal and value of tennis as a research topic has also increased in line with the growth, professionalization, and commercialization of the game. In the quest for optimizing fan experiences, maximizing player performance and increasing mass adoption, different sport science disciplines have extensively explored tennis as a subject of study<sup>3</sup>.

From a governance perspective, there are different organizations that operate in the tennis ecosystem. Private and public, profit and non-profit, local, provincial, regional, national and international. The national sport federations (NSF) are the national sport governing bodies (NSGBs) of the sport within their respective countries. As part of their roles of developing and promoting their sport, they should face a considerable complex scenario arising from government, commercial and social demands as well as internal stakeholder needs<sup>4</sup>.

National sport federations (NSF) are key actors within the sport system and as such they need to justify their activities to their stakeholders. Together with the government, the sponsors, the member clubs, the media, the players and the fans, the coaches are relevant constituents<sup>5</sup>. The complex environment affecting society in general and sport in particular has caused considerable organizational changes geared to adapt the structure of the NSFs to the challenges of these developments. This organizational adaptation has led to a transformation of sport federations towards professionalization<sup>6</sup>. These major challenges facing these organizations include, among others, an increasing competitive context both at high-performance and at participation level, a growing competition in attracting funding and sponsors, higher demands in governance, integrity, transparency and democratization, and calls for inclusion, equality and sustainability in the strategy and management of their programs. Scholars have devoted much attention to most of these aspects<sup>7</sup>.

The Real Federación Española de Tenis (RFET) is the NGB of tennis in Spain. Founded in 1909, it is affiliated to the International Tennis Federation (ITF) and it has been considered one of the most successful NGBs in Spain due to its trajectory throughout the years as well as to the recent success of players such as Rafael Nadal or Garbiñe Muguruza. Within its governance, the RFET has different categories of members: players, clubs, referees and coaches. In order to be RFET members, coaches should have a valid coaching license issued by the RFET. The coaches play a crucial role in the operation of the RFET since, among other functions, they deliver programs, organize competitions, and promote tennis at all levels of the game<sup>8</sup>. This relevance is the main reason why they have been selected as the sample for this research. The RFET is responsible for the promotion and development of tennis in Spain. Its tasks especially include representing Spanish tennis at international level, organizing competitions and events, dictating rules and regulations, coordinating the activity of the 17 Autonomous Federations, delivering education for coaches and

officials, and promoting grassroots tennis in the country<sup>9</sup>. It is a private non-for-profit organization partially funded by the High Council for Sports (CSD) and operates in a de-centralized interorganizational network mode by governing its member organizations operating in specific geographic regions<sup>10</sup>.

Tennis is one of the most popular sports in Spain since it attracts people of different age groups and skills levels<sup>11</sup>, even though the number of registered players has decreased gradually during the last decade<sup>12</sup>. At organizational level, the players, the clubs, the federations and the coaches are the basis and the engine that drive the sport. From a business perspective, tennis in Spain clearly meets the best conditions for commercialization as it is a sport for a lifetime that can be played all-year round, at an affordable cost, and it has the attention of the mass media due to the outstanding performance of great stars such as Rafael Nadal or Garbiñe Muguruza, among many, as role models. From a sporting performance view, the RFET and Spanish tennis have been considered as one of the most successful NSFs in the country during the last decades<sup>13, 14</sup>. Internationally, research has also found that Spain has been the most successful tennis nation in the world due to the performance of its top players<sup>15</sup>. Nevertheless, the economic crisis that has affected the country during recent times has had a considerable impact in the finances of the RFET as well as other NSFs<sup>16, 17</sup>.

Scholars have acknowledged the crucial role of Spanish coaches in the success of tennis in the country<sup>18</sup>. The holistic approach and the pedagogical methods based on the relevance of movement, conditioning, effort and consistency used by Spanish coaches define the signature of the so-called the "Spanish system". This has allowed to the development of a training and competition methodology that has proven successful throughout the decades in part due to its practical application and its flexibility and adaptability to the individual features of the players, the coaches and the contexts<sup>19</sup>.

Due to the characteristics mentioned above, the RFET is a unique NSGB organization that plays a central role as key stakeholder in the Spanish tennis ecosystem and, as such, it was felt that its innovation programs would be an appropriate subject of study.

From a general perspective, research has agreed that even though there is not a unique definition of coaching, coaches are main stakeholders in the sport ecosystem. They are considered the key actors in the delivery of instruction to participants in a range of sporting contexts<sup>20</sup>. They are also generators of environments and contexts that transcend the sport itself and foster healthy and holistic developments in people and organizations<sup>21</sup>. They can be viewed as "merely technicians engaged in the transfer of knowledge" or be encouraged to consider their holistic role<sup>22</sup>. Studies have concluded that they are critical in implementing and delivering sport programs<sup>23</sup>. Research has also found that coaches play many functions within their role. They plan, organize, conduct and assess training, competition, management and education processes in their respective sports. The role that coaches fulfill is based on their experience,

knowledge, values, opinions and beliefs. Coaches' activities are considerably influenced by the NSFs in their territory, and they may use innovative approaches to their daily practices<sup>24</sup>.

In the past twenty years the tasks of the coaches have changed considerably as a consequence of the professionalization and commercialization of many sports. The coaching roles have increased in complexity due to the changes, continuous evolution, challenges and developments within a highly unstructured environment. Throughout this process, the coach has become an effective shareholder in an environment that is constantly developing in an organizational and business context<sup>25</sup>. Coaches' perceptions on different aspects of their job have received a considerable attention from research. Studies have investigated their views on their coach education experience<sup>26</sup>, their role frames and philosophies<sup>25</sup>, the social environment of their organizations<sup>27</sup>, the relevance and application of sport science<sup>29</sup>, and the factors affecting Olympic performance<sup>29</sup>. Coaches have also been the focus of innovation studies in teaching methodologies<sup>30</sup>, self-reflection processes<sup>31</sup>, resistance to innovation<sup>32</sup>, entrepreneurial orientation<sup>33</sup>, entrepreneurial activity<sup>34</sup> or perceptions of parental involvement in youth sport<sup>35</sup>.

Research in tennis has also concluded that together with competition, coaches are the most important factor or policy area for international success of nations<sup>15, 36-37</sup>. Development in the sport has been attributed to innovations in technological advances, sport science, training systems and performance analysis. However, little attention has been given to the views of the coaches regarding these innovations. Recently, Buszard et al.<sup>18</sup> explored how tennis coaches and working within tennis National associations perceived the impact of implementing a modified tennis campaign on participation and skill development in children and adults.

Innovation is a term used to refer to related constructs such as "invention", "creativity" or "change". Even though it has been extensively studied in organizational research there is not a unique definition, but it is commonly understood as "a means to organizational conduct and outcome or performance [...] represents newness or novelty [...] as an instrument of social and economic progress"<sup>39</sup>. In the sporting context, the role of innovation is crucial. The specific characteristics of sport create an extremely favorable ground for the generation of innovative practices in its organization, delivery and practice<sup>40</sup>.

Tennis and its industry have been considered a singular market within the entertainment business as one of its most significant providers. The tennis market builds on the interest of the fans, the number of players, the availability of venues, the quality of the deliverers and, of course, the talent of its great stars<sup>41</sup>. Technological progress has drastically transformed recently the tennis market and has allowed the development of mass media to provide access to the game to large numbers of new "consumers of leisure". From an innovation perspective, tennis is particularly considered a favorable scenario. The fact that it needs a given equipment (i.e., rackets and balls) to practice has attracted the

interest of the manufacturing industry. Technical innovations in tennis equipment include, among others, the spaghetti strings and the composite rackets<sup>42</sup>, the racket industry<sup>43,44</sup> as well as the adapted equipment<sup>23,45</sup> and its influence on game results<sup>46</sup>. Other relevant studies on innovation in the game have focused on seeding<sup>47</sup>, officiating<sup>48</sup>, early introduction<sup>49</sup>, wear creation<sup>50</sup>, training methods<sup>51</sup> or statistical services<sup>52</sup>. Very few studies have been conducted on innovation in tennis programs<sup>38</sup> and, to the knowledge of the authors, none on the coaches' perceptions of the innovation programs of a NSF.

Therefore, it can be considered that, over the last decades, the tennis industry has experienced an ongoing renewal, with innovating firms introducing new products and services that have addressed not only the supply side of their industry, but also its demand side. On the other hand, innovation diffusion and imitation by competing firms in tennis is largely driven by product endorsements by top professionals and advertising<sup>43</sup>. In some cases, innovation in tennis has generated controversy and uncertainty in the market (i.e., innovation in racket materials and design). The potential benefits of some new products or services (i.e., the slower tennis balls) may cause doubts as they could provoke technical uncertainty and uncertainty about the existence of a market for the innovations. This scenario can occur no matter if the innovations are radical, incremental, or continuous and its characteristics help to better understand successes and failures of innovations in tennis. The role of the International Tennis Federation in governing some of these innovations has been crucial, specifically in those related to rule changes, tournament regulations, equipment recognition, etc<sup>23</sup>.

In tennis, the studies that have investigated the role of innovation in the game have concluded in general that the success of any innovative project relies not only in its generation but also, as it may seem to be even more relevant, in the diffusion and adoption of the innovation by the relevant stakeholders and the broader community no matter if it is a product, service, technology or policy. Given the key role coaches play as deliverers of the programs of tennis organizations, it could be considered as obvious to investigate their views on the initiatives in which they have to take part to assist in the innovation strategies of a sport such as tennis. The literature review conducted in preparation for this paper has shown that this is not the case. In fact, to the authors' knowledge and surprisingly enough, just one paper has studied the views of coaches on a specific program of a tennis organization<sup>38</sup>, but no research has been conducted to better understand the views of tennis coaches on the overall innovation strategies of a national federation.

Therefore, the goal of this paper was to fill this gap in the knowledge and insight of the innovative process of sports organizations by analyzing the perception of Spanish coaches regarding the different programs offered by the RFET as part of its innovation strategy.

The structure of this paper is as follows: the introduction and the theoretical background summarize the main aspects related to tennis, NSGBs, innovation, coaches, and coaching. This is followed by the material and methods section,

which deals with the research design, the data collection, and the analysis. The next part is the results section, which includes the data on the general descriptors, on the statistical analyses conducted, and on the selected most relevant innovative programs put in place by the RFET in the period of study. The discussion section compares the results obtained with those of previous studies and their significance. Finally, the conclusions highlight the theoretical and practical implications and applications of the study, its limitations, its contributions to the body of research as well as the future lines of research.

Based on the scenario presented in this section, it was considered relevant to explore the perceptions of coaches, as key stakeholders, on the innovation programs of a NSF such as the RFET.

## **6. Material and methods**

The research design, the data collection and the analysis are presented in this section. The study has followed relevant the ethical and procedural guidelines in accordance with the ethical standards of the institution.

The data used for this study was based on the first author's involvement with tennis and was collected from a questionnaire and the analysis of content produced by the organization. The period 2016-2020 was the timeframe of the study since during these years the RFET implemented a series of programs in different areas of their activity. This period was chosen as this was the mandate of the actual President and BoD of the RFET as stated by the Spanish Government Law.

### *6.1 Instrument for data collection*

The validated questionnaire used by Winand, Vos, Zintz, and Scheerder<sup>53</sup> was adapted for a tennis NSGBs. The attitudes and perceptions are assessed in three levels (managerial, organizational and environmental) and at different subcategories of each level using a Likert scale (1 = completely disagree to 5 = completely agree) in the 29-item questionnaire (Table 1). A full description of the original questionnaire can be found in previous studies<sup>53,54</sup>.

Table 1. Levels, categories, sub-categories and items of the survey.

<b>Levels and categories</b>	<b>Sub-categories</b>	<b>Items (n=29)</b>
<b>Managerial level determinants</b>		
Attitude towards traditional management	Bureaucracy	1. The structure and responsibilities of the RFET are unlike private firms
	Inflexible structure	2. A traditionally formal and hierarchic administrative model is preferable to a flexible and less structured model
	Against change	3. Change to the internal functioning of the RFET can be counterproductive
Attitude favoring change and newness	Investment in new services	4. More financial investments (even risky) should be achieved by the RFET to develop new services for members
		5. The RFET should invest in the development of new services
	Risk taking	6. To achieve their goals, the RFET should take risks
	Openness to change	7. Change is globally a good thing for the RFET
	Openness to members' expectations	8. The RFET should deliver new expectations of their members
	Openness to club's suggestions	9. Suggestions of clubs should be taken into account by the RFET
Attitude towards contemporary management	Openness to staff suggestions	10. Paid staff have ideas that the RFET should take into account
	Professional management	11. The RFET should be managed like business firms
		12. It is important to have a clear mission and vision statement
	Involvement in decision making processes	13. RFET paid staff should be involved in the decision-making processes
<b>Organizational level determinants</b>		
Perception of organizational culture	Culture and relationships	14. RFET has an organizational culture and relationships between volunteers and paid staff that favors innovation
	General	15. The RFET is innovative

Perception of innovativeness	Specific services	16. The RFET provides innovative services, programs, products and events
	Strategies and policies	17. The RFET has coherent strategies and policies in place geared towards innovation
Perception of ability to lead change	Leadership within the organization	18. The RFET has an organizational ability with their volunteers and staff to lead the change
	Leaders champions	22. There is a clear commitment from the RFET volunteers to innovate in tennis
<b>Environmental level determinants</b>		
Perception of pressures	External pressures	20. There are external pressures to the RFET to change and innovate
Perception of competitive national environment	Attraction of members	19. RFET competes with other sports federations to attract members
	Attraction of grants	21. RFET competes with other sports federations to attract grants
	Competition with commercial sports providers	23. Commercial sports providers are a threat to the RFET's growth
Perception of cooperative environment	Cooperation with other organizations	24. The RFET cooperates with other tennis and non-tennis organizations to innovate
Perception of competitive regional environment	Sport rivalry between regional sport federations	25. There is rivalry between the different regional tennis federations
Perception of competitive international environment	High-level sport competition	26. International tennis competition between national sports federations is increasing
		27. Competition between national tennis federations to obtain international results is high
Perception of COVID-19 impact	Impact on the strategy and structure	28. COVID-19 has negatively affected the strategy and structure of the RFET
	Impact on the capacity to innovate	29. COVID-19 has negatively affected the innovation capacity of the RFET



The questionnaire included a section with open answers for respondents to indicate different new initiatives which were implemented by the RFET during the last four years. This section was adapted to tennis from the one used by Winand, Vos, Zintz, and Scheerder<sup>55</sup> which referred to innovative sport and non-sport services, products, projects, programs, initiatives or activities that national federations can provide.

Table 2. Break-down of tennis and non-tennis services that can be offered by a NSGO.

<b>Level and categories</b>	<b>Sub-category</b>	
<b>Tennis services</b>		
Player development	Participation / grassroots tennis	Programs for players of different categories (i.e., 10, 12, 14, 16 and 18 and Under, adults and seniors).
	Performance / competition	Programs for players (i.e., sports policy, talent selection, training, “camps”, scholarships, etc.).
Competitive structure	Tournaments	Leagues, circuits, championships (i.e., organization, assistance, promotion, etc.).
Policy	Rules	Regulations, procedures for tennis play (i.e., amateur license, COVID-19, etc.).
Education	Activities	Education programs for coaches, referees, administrators (i.e., courses, conferences, congresses, publications, etc.).
<b>Non-tennis services</b>		
General	Management	General management and administration (i.e., procedures, registrations, sign-ins, etc.).
Marketing	Communication	Marketing and communication (i.e., campaigns, initiatives, etc.).
Resources	Equipment	Facilities and equipment (i.e., scholarships, grants, guidelines, etc.).
IT	Communications	ICT services (i.e., networks, platforms, etc.).
Other services	General	Other services (i.e., services provided but not included in the previous sections).

Further data and details were collected by analyzing relevant books, articles, and press cuttings, among other documents available in the RFET website as done in previous studies since it was considered that they would complement the details provided in the survey<sup>55</sup>.

## 6.2. *Sample*

Following the procedure conducted by Winand, Vos, Zintz, and Scheerder<sup>53</sup> a questionnaire was sent to a selected sample of coaches certified by the RFET, to identify and analyze their perceptions on organizational innovativeness. They were identified as the ones to be more likely aware of the relevant features of the current innovations put in place by the RFET because they hold positions as technical directors and head coaches of clubs and regional federations. This was a purposive example as indicated in previous research<sup>56</sup> since these stakeholders were considered expert individuals, with a highly technical view of the context, that are or can be affected by the achievement of the RFET's initiatives. Therefore, it was thought that their expertise and knowledge could provide unique insights and rich information to identify, recognize, and prioritize the issues of interest for the research. Furthermore, they were related to the RFET due to their role of certified teaching professionals. The coaches were grouped according to their experience in two groups: 20-years or less and more than 20-years' experience since this criterion was considered the most objective one to define this aspect of coaching practice.

## 6.3. *Variables*

Table 1 shows the levels, categories, sub-categories, and items included in the questionnaire. It also included items related to the COVID-19 pandemic as well as others adapted from the results of previous research<sup>55,56,58</sup>.

At the managerial level there were 3 categories and 11 sub-categories. At the environmental level there were 5 categories and 9 sub-categories, and at the organizational level there were 3 categories and 6 sub-categories. In the open section of the questionnaire, 2 levels were included: tennis and non-tennis, with 4 categories each one.

## 6.4. *Analysis*

SPSS v. 26 was used to carry out the statistical analysis. The normal distribution of the variables was tested using the Kolmogorov-Smirnov test. Non-parametric tests were used since it was found that data did not distribute normally. Spearman's Rho was used to test for correlations between the items in the different categories. Mann-Whitney U was used to test if there were differences based on the coaches' experience. The significance level was established at 0.05. For all comparisons the size of the effect was calculated using eta-squared. Small effect values were considered  $0.01 < 0.06$ , moderate effect values were considered  $0.06 < 0.14$  and large effect values were considered  $\geq 0.14$ .

Data in the open section was extracted and coded by level, category and sub-category using key terms which generated descriptions of initiatives or projects that were matched with the RFET programs. The innovative program most cited was considered the most preferred one in each category as suggested by Winand, Vos, Zintz, and Scheerder<sup>53</sup>, who considered the number of innovations as relevant criteria in this section.

## **7. Results**

This section includes the results on the general descriptors, on the statistical analyses and on the most relevant innovative programs put in place by the RFET in the period of study.

132 certified tennis coaches took part in the study. 52,7% of the sample had 20 years or less of tennis coaching experience, and 47,3% had more than 20 years of experience.

The results and the significant differences between the two groups according to the years of experience of the coaches are shown in Table 3.

		Item	20 years or less experience Median (IQ)	More than 20 years' experience Median (IQ)	U Mann-Whitney	p	$\eta^2$
<b>Managerial level determinants</b>							
Attitude towards traditional management	Bureaucracy	1	4.00 (2)	4.00 (2)	2137,00	0.99	0.00
	Inflexible structure	2	3.00 (2)	3.00 (2)	2133,50	0.76	0.00
	Against change	3	2.00 (2)	2.00 (2)	2094,50	0.57	0.00
Attitude favoring change and newness	Investment in new services	4	4.00 (2)	4.00 (2)	2039,50	0.61	0.00
	Risk taking	5	5.00 (1)	5.00 (1)	1946,40	0.30	0.01
	Openness to change	6	4.00 (2)	4.00 (2)	2148,50	0.94	
	Openness to members' expectations	7	4.00 (1)	4.00 (1)	1969,50	0.29	0.01
	Openness to club's suggestions	8	5.00 (1)	5.00 (1)	1888,50	0.21	0.01
	Openness to staff suggestions	9	5.00 (1)	5.00 (1)	2082,00	0.73	0.00
	Openness to staff suggestions	10	5.00 (1)	5.00 (1)	2040,50	0.63	0.00
Attitude towards contemporary management	Professional management	11	3.00 (2)	4.00 (3)	1873,00	0.16	0.01
	Involvement in decision making processes	12	5.00 (1)	5.00 (0)	2033,50	0.44	
		13	5.00 (1)	5.00 (1)	1989,50	0.33	0.01

<b>Organizational level determinants</b>							
Perception of organizational culture	Culture and relationships	14	3.00 (2)	3.00 (2)	2052,50	0.60	0.00
Perception of innovativeness	General	15	3.00 (2)	3.00 (2)	2084,50	0.72	0.00
	Specific services	16	3.00 (2)	3.00 (1)	2062,00	0.51	0.00
	Strategies and policies	17	3.00 (2)	3.00 (1)	2007,50	0.53	0.00
Perception of ability to lead change	Leadership within the organization	18	3.00 (2)	3.00 (2)	2109,00	0.94	0.00
<b>Environmental level determinants</b>							
Perception competitive national env.	Attraction of members	19	3.00 (2)	3.00 (2)	1917,00	0.24	0.01
Perception of pressures	External pressures	20	3.00 (0)	3.00 (4)	2061,50	0.55	
Perception competitive national env.	Attraction of grants	21	3.00 (1)	4.00 (2)	1708,00	0.02*	0.03
Perception ability to lead change	Leaders' champions	22	3.00 (2)	3.00 (2)	2130,50	0.94	0.00
Perception competitive national env.	Competition with commercial sports providers	23	2.00 (2)	2.00 (2)	2154,50	0.98	0.00

Perception of cooperative env.	Cooperation with other organizations	24	3.00 (1)	3.00 (2)	2115,50	0.91	0.00
Perception of competitive regional env.	Sport rivalry between regional sport federations	25	4.00 (1)	4.00 (2)	2141,50	0.80	0.00
Perception of competitive internat. env.	High-level sport competition	26	4.00 (2)	3.00 (1)	1694,00	0.03*	0.04
		27	4.00 (2)	4.00 (1)	1867,00	0.13	0.01
Perception of COVID-19 impact	Impact on strategy and structure	28	3.00 (1)	4.00 (2)	1921,50	0.15	0.01
	Impact on capacity to innovate	29	3.00 (2)	3.00 (2)	1944,00	0.27	0.01

Table 3. Results on the coaches' perceptions on the different groups according to their years of experience.

\*Significant differences ( $p < 0.05$ ).

Significant differences between coaches of both groups were only found in two sub-categories of the environmental level determinants. Results showed that the more experienced coaches perceived a more competitive national environment in the attraction of grants as compared to the less experienced ones. They also perceived a more competitive regional environment in the sport rivalry between regional tennis federations than their less experienced counterparts. Significant differences between the two groups of coaches were not found in the managerial and organizational level determinants. At managerial level, results showed that all coaches had a positive perception of an attitude favoring change, newness, and contemporary management. At organizational level, the perception of organizational culture, innovativeness, and ability to lead change was also positive but had less support than at the previous level. Experienced coaches also perceived that the COVID-19 pandemic had a considerable impact on the strategy, structure, and capacity to innovate of the RFET as compared to their less experienced colleagues.

The correlations between the variables of each category are shown in Tables 4, 5 and 6.



Table 4. Correlations for the category “Managerial level determinants”

Items	1	2	3	4	5	6	7	8	9	10	11	12	13
1		0.16	-0.16*	0.22	0.15	0.17	0.14	0.09	0.02	0.11	-0.11	-0.07	0.01
2			0.28**	-0.12	0.01	-0.04	-0.13	0.04	-0.01	0.14	0.16	0.14	0.09
3				-0.20*	-0.16	-0.19*	-0.38**	-0.02	-0.13	0.03	-0.05	-0.01	0.00
4					0.33**	0.44**	0.39**	0.24**	0.19*	0.04	-0.03	0.16	0.17
5						0.31**	0.43**	0.39**	0.20*	0.24**	0.07	0.22*	0.13
6							0.54**	0.28**	0.16	0.15	-0.01	0.20*	0.10
7								0.40**	0.21*	0.00	0.16	0.15	0.05
8									0.41**	0.27**	0.07	0.31**	0.18*
9										0.24**	0.02	0.23**	0.25**
10											0.14	0.25**	0.45**
11												0.28**	0.11
12													0.42**
13													

\*Significant correlations ( $p < 0.05$ ). \*\*Significant correlations ( $p < 0.01$ ).

Table 5. Correlations for the category “Organizational level determinants”

Ítems	14	15	16	17	18
14		0.53**	0.47**	0.50**	0.47**
15			0.84**	0.79**	0.66**
16				0.80**	0.66**
17					0.75**
18					

\*Significant correlations ( $p < 0.05$ ). \*\*Significant correlations ( $p < 0.01$ ).

Table 6. Correlations for the category “Environmental level determinants”

Ítems	19	20	21	22	23	24	25	26	27	28	29
19		0.22*	0.50**	0.41**	0.09	0.40**	-0.07	0.06	0.04	-0.13	-0.17
20			0.20*	0.03	0.01	-0.01	0.09	0.09	0.03	-0.05	-0.06
21				0.18*	-0.18	0.17	0.12	0.10	0.05	-0.05	-0.15
22					0.16	0.67**	-0.26**	-0.07	0.04	-0.10	-0.10
23						0.12	0.02	-0.10	-0.08	0.18*	0.08
24							-0.21*	-0.01	0.02	0.01	-0.14
25								0.37**	0.16	0.27**	0.17*
26									0.59**	0.07	0.07
27										-0.04	-0.04
28											0.50**
29											

\*Significant correlations ( $p < 0.05$ ). \*\*Significant correlations ( $p < 0.01$ ).

In the managerial level determinants, there were significant correlations in items related to the attitude towards traditional management in terms of bureaucracy, inflexible structure, and tendency against change. Also, coaches that perceived an attitude favoring change and newness in the organization also thought that it should investment in new services, take risk, be open to change, to members' expectations and to club's and staff suggestions. In the same way, coaches that perceived a tendency towards contemporary management in the organization also favored professional management practices and the involvement in decision making processes. Regarding the organizational level determinants, there were significant correlations between all items. Therefore, coaches who perceived a given organizational culture and relationships also perceived a tendency to general innovation of the organization through strategies, policies, and specific services together with a perception of the ability of the organization to lead change. As per the environmental level determinants, significant correlations were found so that coaches that had a perception of a competitive national environment and external pressures to the organization for the attraction of members and grants as well as the perception of a cooperative environment with other organizations also perceived a competitive international environment at the high-level tennis competition. Significant correlations were also found between the perception of COVID-19 impact on the strategy and structure and the organization capacity to innovate.

Table 7 includes the innovative programs of the RFET most cited by the coaches classified in levels, categories, and sub-categories. Results showed that tennis services programs were the most often considered as innovations. This can be understood as the coaches' preferences for tennis programs over non-tennis ones. The most cited tennis program was a participation / grassroots tennis project called "TennisXetapas" (Tennis by stages), a strategic long-term plan for player development which provides technical, tactical, physical, mental and competitive guidelines for coaches at each stage. It was launched in 2019 and it is delivered via a website ([www.tenisexetapas.rfet.es](http://www.tenisexetapas.rfet.es)) which includes a textbook, video clips and various supporting materials. Coaches valued the user-friendly pathway provided and the quality of the contents included. The second most cited tennis program was the XVII Online Symposium and National Congress which was held on 7-8 November 2020 as part of the RFET coach education activities and continuous professional development project. It was the first ever online Congress and offered free training to the more than 850 coaches registered. Coaches indicated that the combination of practical and theoretical presentations was extremely helpful for they daily practice.

Table 7. Most cited program or service in each category provided by the RFET in the period of study as identified by the coaches in the questionnaire.

<b>Level and categories</b>	<b>Sub-category</b>	<b>Most cited programs or services</b>	<b>Times cited</b>
<b>Tennis services</b>			
Player development	Participation grassroots tennis	/ 'TenisXetapas'	56
	Performance competition	/ Training camps	23
Competitive structure	Tournaments	Events' grants	15
Policy	Rules	COVID-19 Guidelines	30
Education	Activities	XVII Online Symposium and National Congress	44
<b>Non-tennis services</b>			
General	Management	Tournament Platform	26
Marketing	Communication	Website	14
Resources	Equipment	Facility grants	7
IT	Communications	RFET App	20
Other services	General	Tennis Card	18

## 8. Discussion

The relationships of the results regarding the differences between coaches of both groups and the significant between the variables of each category with previous studies and their significance will be presented in this section. Only references to studies conducted with coaches will be considered. In all categories there have been correlations in some of the items. This indicates that the perceptions of the coaches in the sample are related for some of these items. However, this does not happen in all items and, therefore, this is not generalized throughout the questionnaire. It is important to note, that due to fact that this is a seminal article on this subject, it has been not possible to discuss some of these findings with previous studies.

At the managerial level, the support of an attitude towards contemporary management is in line with the results of Ferkins, Shilbury, and Mcdonald<sup>59</sup> who concluded that the coaches in their sample perceived the need for the professionalization of management and coaching as well as the commercialization of the federation. At the organizational and environmental levels, the results in our study also are congruent with those of De Bosscher, De Knop, and Heyndels<sup>15</sup> who found that the professionalism of the federation and its cooperation with regional

federations and clubs were among the top five relevant factors for international success in tennis.

In terms of the innovative programs identified, the fact that the coaches in the sample considered that a participation / grassroots program geared towards the implementation of a long-term plan for player development is the most innovative project of the RFET is in line with the conclusions of Brouwers, Sotiriadou, and De Bosscher<sup>36</sup> who found that the expert coaches in their sample recommended that the tennis federation provides coaches with a clear development pathway and a clear coaching philosophy. The identification of a coach education project as the second most cited innovation event of the RFET is also aligned with the results of Brouwers, Sotiriadou, and De Bosscher<sup>37</sup> who found that expert coaches of national tennis federations indicated that the coaches' education system of the federation appeared to be one of the most important supporting policies for elite tennis success.

## **9. Conclusions**

The theoretical implications of our findings help to provide a specific overview on the current state of the innovation strategies in a tennis NSGB. From a practical perspective, several implications for managers, administrators and volunteers can be drawn. As per the management and organizational levels, the views of the coaches emphasize the need for sport federations to establish contemporary professional structures and programs to accomplish their work more efficiently and to adequately meet the expectations of a complex, challenging and dynamically changing environment<sup>60</sup>. At the environmental level, the coaches have highlighted the competitiveness of the tennis ecosystem in the search of grants and funding. The coaches in the sample have also stressed the negative impact of the COVID-19 pandemic on the innovation capability of the RFET.

In terms of specific innovations identified by the coaches in the sample, it is worth mentioning the relevance of coach education and the opportunities for coaches to attend events that will help develop their competencies<sup>37</sup>.

The sample characteristics and the fact that gender could have been considered as a variable can be considered as limitations of this study, despite they are not dissimilar to several previous research on this field. Future research lines include the study of the views of coaches about the programs of other federations such as local (provincial), regional (continental) and international federations and the study of perceptions of other relevant stakeholders such as athletes, club managers, volunteers, journalists or fans, among others. A qualitative design study would help leaders and executives to gain further insight on the perceptions of relevant stakeholders such as the coaches.

This paper contributes to a deeper understanding of the perception of coaches on the innovation programs of a relevant NSGB in a country. It provides interesting insight on the management, organizational and environmental aspects of innovation in the federation. The results have shown that coaches identify tennis services related to the provision of general development guidelines and educational opportunities as

the most valued innovative programs delivered by the RFET in the period of analysis and that the COVID-19 pandemic has negatively affected the innovation strategy and capability of the organization. It can be concluded that leaders and managers should take into account these perceptions to further improve in the generation and implementation of innovative services to satisfy the needs of their stakeholders.

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## 12. Declaration of Conflicting Interest

The authors declare that there is no conflict of interest.

## 13. References

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## **CAPÍTULO IV. INNOVATION PROGRAMS OF THE ROYAL SPANISH TENNIS FEDERATION**

Crespo, M., Botella-Carrubi, D., & Jabaloyes, J. (2022). Innovation programs of the Royal Spanish Tennis Federation. *Technological Forecasting and Social Change*, 175, 121339. [doi.org/10.1016/j.techfore.2021.121339](https://doi.org/10.1016/j.techfore.2021.121339)

El presente capítulo incluye una adaptación del artículo para la tesis.



## **1. Title:**

Innovation programs of the Royal Spanish Tennis Federation

## **2. Highlights**

- Tennis players innovations refer to performance and participation
- Other tennis innovations relate to coach education and IT services
- COVID-19 has negatively affected the innovation ability of the RFET

## **3. Abstract**

This research studied the innovation programs implemented by the Spanish Tennis Federation (RFET) during the last four years. Innovation has been defined as the successful exploitation of new ideas. The research question is twofold. Firstly, to which extent the RFET is pursuing innovations and how these are perceived by their stakeholders. Secondly, the role that both the general sport context and the features of the RFET play in the innovations. A combination of qualitative and quantitative research methods was used. Semi-structured interviews were conducted both with the RFET volunteers and executives (n=10). An online semi-structured questionnaire was completed by a sample of stakeholders (n=205) in which participants were asked to identify and assess the innovation initiatives of the RFET. The findings will provide a starting point for acquiring a better understanding of the variety of innovations being implemented by the RFET. They will be compared with those of previous studies done in NSGBs from Belgium, Canada, and Lithuania. This study should be the basis for the design of practical management resources that will help the RFET and other NSFs to advance in the generation, management, and assessment of innovation programs in their sport settings.

**4. Keywords:** innovation, programs, sport, tennis

## **5. Abbreviations**

AGM – Annual General Meeting  
BoD – Board of Directors  
CSD – High Council for Sports  
ITF – International Tennis Federation  
NPSOs – Non-profit sports organizations  
NSGBs – National Sport Governing Bodies  
RFET – Royal Spanish Tennis Federation

## **6. Funding**

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

## **7. Introduction**

This work addresses two research questions: the stakeholder perceptions on the innovation programs implemented by the Royal Spanish Tennis Federation (RFET) during the last four years (2016-2020) and the impact of COVID-19 on the RFET

capability to innovate. It is hypothesized that stakeholders would value tennis programs over general ones, and that the pandemic would significantly affect the innovation capability of the organization. A mixed-method design was used by combining a survey with interviews with the stakeholders.

Innovation has been defined as “any idea, practice, or material artifact perceived as new by the relevant unit of adoption” (Zaltman, Duncan, and Holbek, 1973, p.10). It is a process that implies the adoption of new practices, structures, or technologies (Wolfe, 1994). Innovation is very present in the sport ecosystem. The mutual influence between sport and society drives sport to innovate, change, evolve and adapt to societal developments and trends. The increasing globalization, professionalization and commercialization of the sport ecosystem shows its ability to effectively negotiate the increasing demands of a continuously changing environment (Tjønnndal, 2018).

The Royal Spanish Tennis Federation (RFET) is the national governing body (NSGBs) of tennis in Spain. The rise of world stars such as Rafael Nadal, David Ferrer, Roberto Bautista-Agut, Pablo Carreño-Busta, Feliciano López, Fernando Verdasco, Garbiñe Muguruza, and Carla Suárez, among others, has impelled the game to new levels which have demanded from the RFET constant progress and development. Due to this scenario, and in response to these challenges and pressures as well as to the Covid-19 pandemic, the RFET has considered and implemented a variety of innovative programs (RFET, 2020). The tennis community is also facing considerable challenges and risks as the sport is disrupted by Covid-19. It has been stated that, using innovation as the main competitive tool, tennis should be positioned as one of the safest, if not the safest, sport to play in the current climate (Crespo and Jabaloyes, 2020).

Research on sport innovation has gained considerable attention during the last decade. Within this field of study, service, management, or administrative innovation is one of the areas that has gathered less interest as compared to technological and product innovations. More specifically, studies on innovations implemented by NSGBs have been scarce (Ferreira, Fernandes, Ratten, and Miragaia 2020). In a seminal article, Newell and Swan (1995) presented a framework for understanding the diffusion and appropriation processes of innovation within NSGBs. They concluded that the importance of interorganizational networks is crucial of the innovation process. Caza (2000) studied the relevance of context receptivity in the understanding of change receptivity and the innovation process of an amateur sport association. They found several innovative projects related to IT that were implemented by the organization. An explorative typology of sports federations based on their attitudes and perceptions of determinants of innovation and their innovation capacity was developed by Winand et al. (2013a). In a follow up study, Winand et al. (2013b) identified the key role of the innovation champion in a NSGB. They concluded that these individuals were the ones that seemed to promote and support innovation and would encourage the development of an attitude favorable to the establishment of new services. Winand, Scheerder, Vos, and Zintz (2016) questioned whether and to what extent sport federations innovated and identified types of innovations implemented and their attitude and preferences towards innovation. They found that

the NSGBs were driven by demands by members in meeting their expectations of new services and that they are not risk averse. The relationships between organizational intelligence and innovations in NSGBs were studied by Staškevičiūtė-Butienė, Valantinė and Eimontas (2016). They concluded that the more intelligent organizations had an advantage in the analysis of the situation and the decision-making stages of the innovation process. Winand and Anagnostopoulos (2017) applied the concept of service innovation as a mediator and explored the relationship between attitude, innovation and change in NSGBs. They concluded that sport federation staffs showed a positive attitude towards newness, which supported the implementation of service innovation. Finally, the dynamic capabilities that drive growth and innovation in NSGBs were investigated by Harris, Metzger, and Duening (2020). They found that these organizations had notable differences regarding their approach to innovative leadership, organizational learning, market alignment and resource acquisition, and mobilization.

To the knowledge of the authors, in the scientific literature of sport management, there is no study of the innovation programs of a tennis NSGBs and on the impact of the COVID-19 pandemic on their implementation. Therefore, due to this lack in the research and the relevance of the sport and the organization, the goal of this paper is to contribute to the body of research on service innovation in NSGBs to gain a better understanding of the innovation programs of a NSGB such as the RFET and their consideration as innovative organizations.

The remainder of the study is structured as follows. The theoretical background section covers the concept of innovation and sport, its relevance, areas and types, and its relationships with entrepreneurship. The most used innovation models and conceptual frameworks in sport are also examined together with the research on innovation in sport and in tennis. The importance and types of innovation implemented by NSGBs are also put forward. Next, the research context is presented with a focus on the programs of the RFET. The methodology section includes the sample and data collection, the variables analyzed, and the statistical analysis conducted. Then, the results are shown, and these are followed by the discussion with previous research conducted on this area. Finally, the conclusion section includes the contribution, practical implications, and limitations of the study as well as the recommendations for future research.

## **8. Theoretical background**

National Sport Governing Bodies (NSGBs), also called National Federations or Associations, are the organizations that govern each sport in a nation. They play a key role in the sport structure of each nation. They are part of the non-profit sports sector, which has a distinctive economic structure and its own rationality since they are made up of paid staff and volunteers, have a mixed economy that balances grants, revenues from sponsorship and membership (Vos et al., 2012). Their main goal is to manage, promote and develop the sport at all levels of practice, from grassroots participation due to health reasons, to elite high-performance for national pride. They provide sport and non-sport products and services to the sports industry. They control and overview the sport activities, rules, regulations, practices, and

competitions at amateur and professional national and international levels. They also represent the country in that given sport at the international context (Newell and Swan, 1995; Staškevičiūtė-Butienė, Valantinė and Eimontas, 2016). The level of attainment of their mission and goals depends, at least in part, on how effectively they develop adequate innovation programs. There is an inherent link between these organizations, their programs, and innovation. They should implement policies for the management of different innovation processes by applying managerial procedures to formulate the patterns of actions needed for sport innovation to succeed and gain competitive advantage (Tjønndal, 2016).

The progressive commercialization and professionalization of sport and the changing consumer demands are challenging NSGBs to innovate and continuously develop, adapt, and renew their products and services through creative and novel ideas (Newell & Swan, 1995). These challenges and pressures have both internal and external sources. Internally, NSGBs should adapt to the expectations of their stakeholders and members. Externally, they should innovate to grow and gain competitive advantage in attracting and retaining members in an increasingly complex sport ecosystem due to the competition of profit sport organizations, non-organized sports activities and other NSGBs (Vos, Breesch, Késenne, Lagae, Van Hoecke, Vanreusel, and Scheerder, 2012). NSGBs operate in a competitive environment to survive and promote their sport. They compete for political influence, financial assistance, and grants (public or private), results in competition (national or international), media coverage, and membership involvement (Thibault, Slack, & Hinings, 1993). Research has shown that this competition drives innovation, that their ability to innovate is a key competitive contingency, and that the NSGBs that have a favoring attitude to use innovation to cope with the competitive ecosystem in which they operate will be more innovative (Caza, 2000; Winand, Qualizza, Vos, Zintz, & Scheerder, 2013).

According to Newell and Swan (1995) some organizational characteristics of NSGOs (i.e., size, membership, media coverage, funding, paid staff, managerial support) have a strong influence on their capacity to innovate. Some NSGOs are large professional organizations that attract a lot of resources from membership, sponsors, and media, and tend to be contemporary/formal. Others are small, amateur organizations run by volunteers that have few resources from grants and membership and tend to be more traditional/informal and appear to resist current management concepts, whereas others are concerned about organizational performance (Taylor 2004). Large professionalized NSGOs may tend to look for risky innovations, whereas smaller ones run by volunteers could be more adaptable to changes. Committed staff and managerial support favor successful implementation of innovations in sports federations.

Research on human resources influence on innovation in NSGOs has highlighted the relevance of the commitment of professional staff and volunteers, the innovation champions as advocates for change and innovation (Winand et al. 2013b). Innovation attitudes can be influenced by the individual perceptions following the implementation of innovation (Winand and Anagnostopoulos, 2017). From an interorganizational network perspective, Newell and Swan (1995) already identified



the importance of NSGBs as “*key agencies in promoting innovations that offer their particular sport some advantage*” (p. 320). They considered these organizations as open systems strongly influenced by their sports network (e.g., international and continental sports organizations) and stakeholders in their willingness and capacity to innovate and key actors in the interorganizational networks to promote the diffusion of new ideas due to their central position in the national sport system. NSGBs are considered as major players in the diffusion on innovations in sport.

As Staškevičiūtė-Butienė, Valantinė and Eimontas (2016) indicated there considerable research about innovations in sport, but there is still little about innovation programs and development in nonprofit sports organizations, more specifically in national sports federations. The present paper focuses on innovation within a NSGOs and has the aim to contribute to a better understanding of the core activities, the context and the innovation issues faced by a national sport federation.

The present paper fits with the body of research on general organizational innovativeness (Damanpour, 2020; Wolfe, 1994) and, more specifically, with the few studies conducted on innovation in national sport governing bodies (Newell and Swan, 1995; Caza, 2000; Winand et al., 2013a, 2013b; Winand, Scheerder, Vos, and Zintz, 2016; Staškevičiūtė-Butienė, Valantinė and Eimontas, 2016; Winand and Anagnostopoulos, 2017; Harris, Metzger, and Duening, 2020) having this organization as the unit of analysis. This research is also in line with Newell and Swan (1995) who suggested that these unique sports organizations require a new understanding of the concept and process of innovation and the implications of the services they provide to the sport ecosystem. On the other hand, no existing studies have empirically examined either the innovation processes of NSGBs in tennis and in Spain or the impact of COVID-19 on the innovation ability of NSGBs. Hence, the research question is twofold. Firstly, our research explored to which extent the RFET is pursuing innovations and how these are perceived by their stakeholders. Secondly, it examined the impact of COVID-19 in the innovation capability of the RFET.

## **9. Material and methods**

This section provides an overview of the research context, the research design, the data collection, the sample, the variables, and the analysis.

### *9.1. Research context*

The focus of the present paper is on a national sport federation in Spain, the Royal Spanish Tennis Federation (RFET). Founded in 1909, it is a non-government private entity, with its own legal personality, recognized as an organization of public utility, which operates in the whole country. Its affiliated members include the clubs, the players, the coaches, and the referees. Its main roles in general are to manage, organize, regulate, and promote tennis participation and performance in the country. From an operational context, the RFET, in the international field, is a founding member of the International Tennis Federation (ITF), the world governing body of tennis and, in the local context, it coordinates and guides the programs of its

stakeholders, the 17 regional tennis governing bodies which, in turn, are autonomous and the ones that deal directly with the tennis clubs (RFET, 2020a).

In 2019 the RFET had 71,091 affiliated players (20,202 females and 50,889 males), 1,121 affiliated clubs, 5,349 affiliated courts, 748 active officials and 11,904 certified coaches. The number of registered players is almost 9% less than in 2018 and has gradually reduced since 2015 (RFET, 2019) and situates tennis as the 13<sup>th</sup> sport in Spain in terms of affiliated members. In contrast with these data, which include the affiliated RFET members, data from the Spanish government and the ITF indicate that there are around 3 million people that regularly play tennis in Spain (ITF, 2019). This illustrates an obvious challenge for all NSGOs worldwide regarding the discrepancy between their affiliated members and the individuals that practice the sport with no affiliation to the organization.

The RFET has also in place several development programs for both performance and participation tennis. There are also support services provided to some players with regards to medicine, physiotherapy, sport science, nutrition, etc. The RFET used to have a National Training Centre where players used to practice together, which is no longer in operation. It also organizes participation programs and events to increase the number of people taking up the game (RFET, 2020a). Due to these characteristics, the RFET is a unique NSGB organization that plays a central role as key stakeholder in the Spanish tennis ecosystem and, as such, it is felt that it would be an appropriate subject of study.

## *9.2. Research design and data collection*

A combination of qualitative and quantitative research methods was used. Online interviews with key stakeholders provided quality data whereas an online semi-structured questionnaire to other stakeholders provided the quantitative data for the study. This paper is based on the first author's involvement with tennis. The data used for this analysis were collected from a variety of sources: a questionnaire, interviews to key stakeholders and information (documents, websites, emails, etc.) produced by the RFET. The timeframe of the study was the period 2016-2020. During this period, the RFET implemented a series of innovations such as those related to high-performance programs, the attempt of generating income from sponsors, the development of competition leagues for amateur players, and the implementation of transparency policies, among others.

An adapted version of the questionnaire used by Winand, Vos, Zintz, and Scheerder (2013a) was developed for a tennis NSGOs. This specific instrument was considered appropriate to assess the innovation processes of the RFET due to its validation and application to the context and issues of sport federations as suggested by Newell and Swan (1995). The 29-item questionnaire assessed attitudes and perceptions in three levels (managerial, organizational, and environmental) and at different subcategories of each level using a Likert scale (1 = completely disagree to 5 = completely agree) (Table 1). For a full description of the original questionnaire see Winand, Rihoux, Qualizza, and Zintz (2011), and Winand, Vos, Zintz, and Scheerder (2013a). It also included an open answer section in which respondents had to indicate

different new programs which were implemented by the RFET during the last four years. The initiatives were adapted to the tennis context from those general used by Winand, Vos, Zintz, and Scheerder (2013a) which referred to innovative sport and non-sport services, products, projects, programs, initiatives, or activities that national federations can provide. The four-year period (2016-2020) was chosen as this was the mandate of the current President and BoD of the RFET as stated by the Spanish Government Law.

Table 1. Levels, categories, sub-categories, and items of the survey.

<b>Levels and categories</b>	<b>Sub-categories</b>	<b>Items (n=29)</b>
<b>Managerial level determinants</b>		
<b>Attitude towards traditional management</b>	Bureaucracy	19.The structure and responsibilities of the RFET are unlike private firms
	Inflexible structure	20.A traditionally formal and hierarchic administrative model is preferable to a flexible and less structured model
	Against change	21.Change to the internal functioning of the RFET can be counterproductive
<b>Attitude favoring change and newness</b>	Investment in new services	22.More financial investments (even risky) should be achieved by the RFET to develop new services for members 23.The RFET should invest in the development of new services
	Risk taking	24.To achieve their goals, the RFET should take risks
	Openness to change	25.Change is globally a good thing for the RFET
	Openness to members' expectations	26.The RFET should deliver new expectations of their members
	Openness to club's suggestions	27.Suggestions of clubs should be taken into account by the RFET
	Openness to staff suggestions	28.Paid staff have ideas that the RFET should take into account
<b>Attitude towards contemporary management</b>	Professional management	29.The RFET should be managed like business firms 30.It is important to have a clear mission and vision statement
	Involvement in decision making processes	31.RFET paid staff should be involved in the decision-making processes
<b>Organizational level determinants</b>		
<b>Perception of organizational culture</b>	Culture and relationships	32.RFET has an organizational culture and relationships between volunteers and paid staff that favors innovation
	General	33.The RFET is innovative

<b>Perception of innovativeness</b>	of	Specific services	34. The RFET provides innovative services, programs, products and events
		Strategies and policies	35. The RFET has coherent strategies and policies in place geared towards innovation
<b>Perception of ability to lead change</b>		Leadership within the organization	36. The RFET has an organizational ability with their volunteers and staff to lead the change
		Leaders champions	22. There is a clear commitment from the RFET volunteers to innovate in tennis
<b>Environmental level determinants</b>			
<b>Perception of pressures</b>		External pressures	20. There are external pressures to the RFET to change and innovate
<b>Perception of competitive environment</b>	of national	Attraction of members	19. RFET competes with other sports federations to attract members
		Attraction of grants	21. RFET competes with other sports federations to attract grants
		Competition with commercial sports providers	23. Commercial sports providers are a threat to the RFET's growth
<b>Perception of cooperative environment</b>	of	Cooperation with other organizations	24. The RFET cooperates with other tennis and non-tennis organizations to innovate
<b>Perception of competitive environment</b>	of regional	Sport rivalry between regional sport federations	25. There is rivalry between the different regional tennis federations
<b>Perception of competitive international environment</b>	of	High-level sport competition	26. International tennis competition between national sports federations is increasing
			27. Competition between national tennis federations to obtain international results is high
<b>Perception of COVID-19 impact</b>		Impact on the strategy and structure	28. COVID-19 has negatively affected the strategy and structure of the RFET
		Impact on the capacity to innovate	29. COVID-19 has negatively affected the innovation capacity of the RFET

Table 2. Break-down of tennis and non-tennis services that can be offered by a NSGO.

<b>Level and categories</b>	<b>Sub-category</b>	
<b>Tennis services</b>		
<b>Player development</b>	Participation / grassroots tennis	Programs for players of different categories (i.e., 10, 12, 14, 16 and 18 and Under, adults and seniors).
	Performance / competition	Programs for players (i.e., sports policy, talent selection, training, “camps”, scholarships, etc.).
<b>Competitive structure</b>	Tournaments	Leagues, circuits, championships (i.e., organization, assistance, promotion, etc.).
<b>Policy</b>	Rules	Regulations, procedures for tennis play (i.e., amateur license, COVID-19, etc.).
<b>Education</b>	Activities	Education programs for coaches, referees, administrators (i.e., courses, conferences, congresses, publications, etc.).
<b>Non-tennis services</b>		
<b>General</b>	Management	General management and administration (i.e., procedures, registrations, sign-ins, etc.).
<b>Marketing</b>	Communication	Marketing and communication (i.e., campaigns, initiatives, etc.).
<b>Resources</b>	Equipment	Facilities and equipment (i.e., scholarships, grants, guidelines, etc.).
<b>IT</b>	Communications	ICT services (i.e., networks, platforms, etc.).
<b>Other services</b>	General	Other services (i.e., services provided but not included in the previous sections).

The semi-structured in-depth interviews were conducted online both with the RFET BoD volunteers and executives (n=10). A semi-structured set of interview guidelines was designed by the first author with the assistance of the other two authors. The questions for the interview were extracted from those used in previous research (Newell and Swan, 1995; Hoerber and Hoerber, 2012) which included concepts that were relevant to gain further insight on the different aspects and programs identified in the open section of the questionnaire. The interviews were used to further explore and clarify the meaning that participants gave to the identified innovation and to fully understand the concepts, descriptions, and characteristics of these programs. They allowed participants to elaborate on key aspects and terms mentioned in the questionnaire, highlight unforeseen considerations, and raise points relevant to the high-level themes and topics relevant to the study. Further data and details were collected in e-mails, analysis of relevant documents available in the RFET website, and follow-up telephone calls as done in previous studies (Caza, 2000; Hienerth, 2006).

### 9.3. *Sample*

The questionnaire was sent to key stakeholders in line with the study by Winand, Vos, Zintz, and Scheerder (2013a) to gather, identify and analyze the perception of these individuals for organizational innovativeness. The criteria for the selection of the stakeholders were in accordance to the membership structure of the RFET. In line with previous studies (Ride, Ringuet, Rowlands, Lee, and James, 2013) they were grouped into three specific profiles according to their roles: board volunteers (RFET BoD member and BoD member of a regional federation or club), executive staff (RFET executive professional staff and executive professional staff of a regional federation or club), and others (certified coach, teacher or researcher, active referee or tournament organizer, and licensed player or fan).

As suggested by Ringuet-Riot, Hahn and James (2014) purposive sample was used and they were considered as individuals who can affect or are affected by the achievement of the RFET's initiatives. They were seen as experts with a highly technical view of the context and, as such, based on their expertise it was felt that they could provide rich information and unique insights by identifying, recognizing, articulating, and prioritizing some of the main issues of interest for the research. They were the ones to be more likely aware of the relevant features of the current innovations put in place by the RFET (Damanpour and Schneider, 2009). They should have some type of relationship with the RFET, whether as volunteer board members, executive paid staff, certified teaching professionals, active referees, or licensed players. Therefore, they were a small percentage of the tennis stakeholder population which was not easy to access to. However, due to personal contacts and involvement of the first author it was possible to gather the views of the most representative of them. The sample for the semi-structured in-depth interviews consisted of several RFET BoD members and RFET professional staff. It was considered that participants had considerable experience within their role to identify and describe the new programs and evaluate their impact on the organization.

#### 9.4. *Variables*

The questionnaire's levels, categories, sub-categories, and items of innovation are shown on Table 1. Some of them were adapted to tennis from the questionnaire of Winand, Vos, Zintz, and Scheerder (2013a), whereas others were included in attention to the COVID-19 pandemic as well as from the results of previous research (Caza, 2000; Newell and Swan, 1995; Hoeber and Hoeber, 2012). At managerial level categories and sub-categories included: attitude towards traditional management (bureaucracy, inflexible structure, against change), attitude favoring change and newness (investment in new services, risk taking, openness to change, to members expectations, to club's suggestions and to staff suggestions), and attitude towards contemporary management (professional management and involvement in decision making processes). At environmental level: perception of competitive regional environment (sport rivalry between regional sport federations), perception of competitive national environment (attraction of members, attraction of grants and competition with commercial sports providers), perception of competitive international environment (high-level sport competition), perception of COVID-19 impact (on the strategy and on the capacity to innovate), and perception of pressures (external), and perception of a cooperative environment (cooperation with other organizations). At organizational level: perception of organizational culture (relationships), perception of innovativeness (general, specific services, strategies, and policies), and perception to lead change (leadership within the organization and leadership champions).

The open section of the questionnaire included the level (i.e., tennis and non-tennis) and the categories of services that can be offered by a NSGO. The different categories of tennis services included: player development (participation/grassroots and performance/competition), competitive structure, policy, and education. The non-tennis services included: general, marketing, resources, IT, and other services.

#### 9.5. *Analysis*

This section presents the statistical analysis undertaken. The objectives of the analysis were to identify the perceptions of the different stakeholders, their preferences on innovation programs and their views on the impact of the pandemic on the RFET.

Statistical analysis was carried out using the SPSS v. 26. The Kolmogorov-Smirnov test was used to test whether the variables were normally distributed. Deviations from normality were found for each one of the variables ( $p < 0.01$ ). Therefore, non-parametric tests were used. The Kruskal Wallis test was used to compare each of the items according to the three groups of subjects, establishing the significance level of 0.05. To carry out post hoc comparisons between groups, the Mann-Whitney U with Bonferroni correction was used, establishing the level of significance at 0.01.

The data from the open section of the questionnaire was analyzed and classified according to their allocation into the two levels of tennis and non-tennis initiatives developed for the first time by the RFET during the last four years. Within each



category of each level, key higher-order themes and terms were identified, extracted, and coded to create key results of descriptions of identified programs, projects, or initiatives. These terms were then matched with the names of programs in place as labelled by the RFET. Following the method used by Winand, Vos, Zintz, and Scheerder (2013a), who considered the number of innovations as relevant criteria in this section, the innovative program most cited was considered the most preferred one in each category. The interviews were recorded and transcribed into documents which were analyzed to produce key results and messages. In each of the two levels of tennis and non-tennis initiatives the higher-order themes were extrapolated from the data. Descriptions of the new initiatives were analyzed to provide a source of collated information.

## **10. Results**

First an overview of the general descriptors is provided. Then, the results of the statistical analysis are presented. Finally, the information on the most relevant innovative programs put in place by the RFET in the period of study will be given.

The sample of the study was as follows: 205 participants who were classified as 15 board volunteers (5 RFET BoD members and 10 BoD members of regional federations or clubs), 33 executive staff (10 RFET professional staff and 23 professional staff of regional federations or clubs), and 157 other stakeholders (131 certified coaches, teachers, or researchers, 8 active referees or tournament organizers, and 18 players or fans) took part in the study. 42% of the sample had more than 20 years of tennis experience, 31,2% had between 11 and 20 years of experience, and 26,8% had up to 10 years of experience.

Table 3 shows the results and the significant differences between the perceptions of the different groups in the questionnaire items.

Table 3. Results on the perceptions of the different groups in the questionnaire items.

		Item	BoD volunteers Mean (SD)	Executive staff Mean (SD)	Other Mean (SD)
<b>Managerial level determinants</b>					
<b>Attitude towards traditional management</b>	Bureaucracy	1	3,80 (1,08)	3,84 (1,21)	3,63 (1,05)
	Inflexible structure	2	3,33 (1,29)	2,65 (1,11)	3,03 (1,29)
	Against change	3	2,67 (1,05)	2,26 (0,97)	2,33 (1,08)
<b>Attitude favoring change and newness</b>	Investment in new services	4	3,20 (1,21)	3,52 (1,39)	3,85 (1,19)
	Risk taking	5	4,60 (0,51)	4,35 (0,89)	4,56 (0,70)
	Openness to change	6	3,67 (1,18)	3,71 (0,94)	3,95 (1,02)
	Openness to members' expectations	7	3,80 (1,15)	4,00 (1,03)	4,24 (0,79)
	Openness to club's suggestions	8	4,60 (0,51)	4,35 (0,71)	4,41 (0,79)
	Openness to staff suggestions	9	4,73 (0,46)	4,45 (0,81)	4,62 (0,75)
	Openness to staff suggestions	10	4,53 (0,74)	4,71 (0,73)	4,46 (0,78)
<b>Attitude towards contemporary management</b>	Professional management	11	3,60 (1,18)	3,48 (1,06)	3,23 (1,34)
	Involvement in decision making processes	12	4,87 (0,35)	4,58 (0,62)	4,68 (0,66)
	Involvement in decision making processes	13	4,27 (1, 10)	4,32 (0,70)	4,50 (0,75)
<b>Organizational level determinants</b>					
<b>Perception of organizational culture</b>	Culture and relationships	14	2,87 (1,30)	2,94 (1,15)	3,02 (1,10)
	General	15	2,73 (0,88)	3,16 (0,90)	2,88 (1,04)
<b>Perception of innovativeness</b>	Specific services	16	2,87 (0,83)	3,16 (0,90)	2,91 (1,01)
	Strategies and policies	17	2,67 (0,90)	3,03 (0,75)	2,93 (1,00)

<b>Perception of ability to lead change</b>	Leadership within the organization	18	2,80 (1,08)	3,19 (0,91)	3,10 (1,18)
<b>Environmental level determinants</b>					
<b>Perception competitive national env.</b>	Attraction of members	19	3,40 (1,30)	2,87 (1,23)	3,05 (1,31)
<b>Perception of pressures</b>	External pressures	20	3,20 (0,86)	3,10 (0,87)	3,14 (0,86)
<b>Perception competitive national env.</b>	Attraction of grants	21	3,60 (1,12)	4,03 (0,98)	3,66 (1,07)
<b>Perception ability to lead change</b>	Leaders champions	22	3,00 (1,25)	3,23 (0,92)	2,99 (1,12)
<b>Perception competitive national env.</b>	Competition with commercial sports providers	23	2,27 (1,10)	2,00 (1,24)	2,23 (1,21)
<b>Perception of cooperative env.</b>	Cooperation with other organizations	24	2,93 (0,96)	3,45 (1,00)	3,25 (1,10)
<b>Perception of competitive regional env.</b>	Sport rivalry between regional sport federations	25	3,80 (1,01) <sup>a</sup>	2,87 (1,26) <sup>ab</sup>	3,61 (1,13) <sup>b</sup>
<b>Perception of competitive internat. env.</b>	High-level sport competition	26	3,33 (0,82)	3,06 (1,00) <sup>b</sup>	3,69 (0,89) <sup>b</sup>
		27	3,53 (0,99)	3,61 (1,15)	3,74 (0,93)
<b>Perception of COVID-19 impact</b>	Impact on strategy and structure	28	3,40 (1,60)	3,35 (1,14)	3,61 (1,09)
	Impact on capacity to innovate	29	2,53 (1,30)	2,55 (1,09) <sup>b</sup>	3,26 (1,24) <sup>b</sup>

<sup>a</sup>Significant differences ( $p < 0.01$ ) between BoD volunteers and executive staff; <sup>b</sup> Significant differences ( $p < 0.01$ ) between executive staff and other.

No significant differences between groups were found at the managerial and organizational levels and categories. However, at the environmental level, results showed that there were significant differences in the sub-categories related to the perception of competitive regional environment, international environment, and COVID-19 impact. Results showed that there were significant differences between BoD volunteers and executive staff as per their perception on the competition between different regional tennis federations in the country since BoD volunteers perceived more competence than the executive staff. Results also showed significant differences between the perceptions of executive staff and other stakeholders in the competition between different regional tennis federations in the country, with the executive staff perceiving less competition than the other stakeholders. Significant differences were also shown in the perceptions of executive staff and other stakeholders in the increase of the international competition between the different national tennis federations, since stakeholders perceived more international competition than executive staff did. Significant differences were also shown in the perceptions of executive staff and other stakeholders in the impact of COVID-19 in the ability of the RFET to innovate, since stakeholders perceived a more negative impact than executive staff did.

As per the managerial level, results showed that all stakeholders positively supported an attitude towards favoring change and newness (investment in the development of new services, risk taking to achieve its goals, openness to change as a good thing for the RFET, openness to members expectations, to club's and to staff suggestions) as well as an attitude towards professional management that has a clear vision and mission and the involvement of the RFET paid staff in decision making processes. At the organizational level, results on the perception of organizational culture, innovativeness in specific services, strategies, and policies, as well as the perception to lead change through leadership within the organization and leadership champions) showed a positive but lower support than at the other two levels. Regarding the environmental level, the results showed a strong perception of regional, national, and international competitive environment between sport federations and that commercial providers are not a threat to the RFET. The negative perception of the impact of COVID-19 more on the strategy and the structure of the organization than on its capacity to innovate, was also shown.

Participants highlighted a number of higher-order themes related to the tennis and non-tennis levels and several key themes or examples related to the categories and sub-categories of programs and services provided by the RFET. The programs most cited as identified and classified in different levels, categories and subcategories are included in Table 4.

Table 4. Most cited programs or services provided by the RFET in the period of study as identified in the questionnaire and further described in the interviews.

<b>Level and categories</b>	<b>Sub-category</b>	<b>Most cited program or service</b>
<b>Tennis services</b>		
<b>Player development</b>	Participation / grassroots tennis	“TennisXetapas”
	Performance / competition	Assistance to players
<b>Competitive structure</b>	Tournaments	National Amateur Circuit and National Future Master
<b>Policy</b>	Rules	COVID-19 regulations and “Tennis card”
<b>Education</b>	Activities	Online Symposium and National Congress
<b>Non-tennis services</b>		
<b>General</b>	Management	Global Tennis Platform
<b>IT</b>	Communications	App “e-tenista”

Examples of the most cited innovations implemented by the RFET as identified in the questionnaire and quotes from the interviews will be used throughout this section to illustrate the introduction, usage, dissemination, and perception of some of the most important initiatives. To structure the research findings from our interview and questionnaire data they will be presented following the classification used in the questionnaire and the interview. As it can be seen, programs related to tennis services were more often identified as innovations than non-tennis programs.

#### *10.1. Tennis services: Player development (participation/grassroots)*

In this category, the most cited innovation was the program called “TennisXetapas” (Tennis by stages). This is a pioneering project developed in 2019 by the Sports Direction and the Coaching and Research Area of the RFET. It is a plan which delineates the training and competition pathways for a solid development of tennis players. The objective of the RFET is to provide all those involved with the development of tennis players in Spain (coaches, player support team members, etc.), with the appropriate guidelines, content and information that will facilitate the adequate player progression throughout each of the phases of a player’s career. The project also includes advice from top Spanish players and coaches since some of the most prominent names in Spanish tennis participated in the program with a series of interviews in which they share their personal and professional experience.

As stated by the RFET Sports Director: *“Tennis by Stages is the first Tennis Player Development Plan that is developed in Spain with the aim of unifying the criteria for teaching our sport. The program is aimed at club coaches and is divided into 7 training stages, from 4 to 18 years old, and provides key details on*

*7 essential core sections: technique and tactics, physical conditioning, injury prevention, nutrition, materials and psychology. "*

### *10.2. Tennis services: Player development (performance/competition),*

Another relevant program identified was that of the assistance to high-performance players. The main goal of this program is to facilitate the transition to professionalism of young tennis talents that will follow up the path created with Rafa Nadal or Garbiñe Muguruza among other top Spanish players. The RFET has implemented both direct and indirect new assistance to benefit these players. Direct assistance is provided through individual scholarships to players which has increased from 80,000€ in 2016 to 525,000€ in 2020. Indirect assistance is geared to consolidate the "pyramid of tournaments" that allows more events to take place in Spain. In 2016 tournament organizers received 25,000€ as compared to the 640,00€ distributed in 2020.

As indicated by one RFET BoD member: *"The players who are the target of this program are those who progress from the ITF Futures and Challengers levels up. It is crucial that they can play at home, in Spain, to win ranking points while saving costs"*.

### *10.3. Tennis services: Competitive structure*

Two new programs were mentioned in this category. The National Amateur Circuit and the National Future Master. In 2018, the first edition of the National Amateur Circuit was launched by the RFET with the goal of increasing the base of recreational beginner tennis players. Specifically, it was aimed to make the amateur player feel comfortable within the tennis family. Its main components were a professional organization with personalized attention, a level-based competition adapted to each player, the possibility of having fun both on- and off-court, and the opportunity to meet new people and make friends.

As stated by the RFET staff person in charge of this program: *"The National Amateur Circuit was created to motivate players, increase participation, promote a concept of tennis as a family sport, reinforce healthy habits, and emphasize socialization. The main goal is to attract and retain people in tennis!"*

As per junior tennis, launched in 2017, the National Future Master brings together the 8 best female and 8 best male 23 and under players. The event format mirrors that of the Next Gen ATP Masters. It is played in a round-robin phase of two groups followed by a single elimination draw. It offers equal prize money 20,000€ for both draws. In 2020, the event was cancelled due to the pandemic.

A staff member of the RFET explained this new drive for growth: *"The RFET has to provide all assistance possible to generate a strong and solid competitive base by offering the adequate opportunities. The success is built from a sound*

*competitive structure that is why we are allocating a very important financial budget for this purpose".*

#### *10.4. Tennis services: Policy*

In this category, the new initiative highlighted was the release by the RFET of the COVID-19 guidelines for tennis practice during the pandemic. Following the COVID-19 pandemic and the total lockdown that started in Spain on March 13th, 2020, the RFET published a series of documents for the different de-escalation phases by adapting the resolutions made by the CSD and the Spanish Ministry of Health. The RFET Guide for the return of tennis in the de-escalation phases by COVID-19 included a series of resources and dissemination materials for the return to tennis practice, with the applicable regulations in each of the phases of the de-escalation. This material, distributed free of charge among the Territorial Federations and affiliated clubs, was regularly updated with the latest measures taken by the CSD.

A RFET staff member commented: *"The RFET through its website, as well as through the regional federations have communicated their actions on the practice of tennis (in particular with the membership and modifications of the conditions of practice during the current period of pandemic."*

#### *10.5. Tennis services: Education*

The first ever RFET Online Symposium and XVII National Congress was the most innovative event of this category. The free event aimed to assist coaches in their continuous professional development following the situation caused by the COVID-19 pandemic. The virtual meeting offered 17 hours of free online training and was broadcasted live on November 7<sup>th</sup> and 8<sup>th</sup> through the Internet. More than 850 registered participants took part in the event. Some of the topics covered by 50 renowned speakers invited included: grassroots tennis and player development in the early stages, professional development, physical and mental preparation applied to tennis, competitive and high competition tennis, tennis research, and adapted tennis. It also included a free communication and question and answers sessions.

The director of the RFET Coaching and Research Area, stressed that: *"In a context as difficult as the one we are experiencing, it is important that the RFET helps coaches as much as possible, that is why the congress of this year was completely free and could be followed online".* He added: *"This 1<sup>st</sup> online symposium has come to stay. However, hopefully the situation due to the pandemic improves and it could be another training option that will coexist next year with the face-to-face conference".*

#### *10.6. Non-tennis services: General*

The Global Tennis Platform was the most innovative program identified in this category. Launched in 2020, it is an integral online management tool developed



to serve all stakeholders. This platform expands the services provided by the current Tournament Management Platform which currently only had an open area to check the national ranking and the license number of each registered player.

In words of a RFET staff member: *“The RFET has made a considerable investment in this area. The previous situation was clearly improvable. The new IT services achieve their purpose, which is to improve, simplify and speed up the user experience in relation to the management of the different programs such as tournaments and licenses offered by the RFET.”*

#### 10.7. Non-tennis services: IT

The new RFET technology strategy was developed in three phases which were launched in 2020: The new first mobile web, the app “e-tenista”, and the Global Tennis Platform as explained above. Launched in 2020, the mobile application called 'E-Tennis Player' was the most mentioned innovation in this category. This service allows players to carry their RFET license in their phone, check their ranking, head-to-head results, the details on tournaments played, draws and order of play, etc. The app is available for free for both Android and IOS devices. It ranked fourth as a sports application in the App Store in less than twenty-four hours.

In general, as indicated by one RFET BoD member: *“The implementation and updating of various traditional services through technology such as information on activities and events in a simpler and let's say modern way is one of the most notable changes when it comes to solving some of the users' interests and needs”*.

Our results have shown that the RFET and the Spanish tennis stakeholders understand the importance of having an innovative mentality that embraces change. Managing a NSGB is a competitive business, and in this environment, we have found and confirmed that innovation is a must. We have shown that NSGBs innovate at different levels, and in several categories and subcategories of programs both related to sport and non-sport services. The results confirm our hypothesis since the views of the tennis sample in this study have highlighted more innovations in the categories related to the tennis level than to the non-tennis level, and the fact that the pandemic had affected the innovation capability of the RFET.

## 11. Discussion

In this section the significance of the results as well as their relationships with previous studies will be covered. For the sake of specificity and to keep the discussion as relevant as possible to the goal of the research, only references to studies conducted with national or regional sport federations will be considered. Therefore, no discussion will be made with research conducted with other sport organizations or NPSOs which are not national governing bodies or federations.

At the managerial level, as per the attitude towards traditional management versus an attitude favoring change and newness which embraces contemporary management, our results coincide with those of Winand et al. (2013a) in terms of the differences between NSGOs, as nonprofit organizations and the for-profit businesses, and the positive attitudes of volunteers, staff and stakeholders towards innovation, risk, and change. These results also support the views of Potts and Ratten (2016) who indicated that, even though the gradual professionalization of sport federations is obvious, there are reasons to expect these organizations to retain distinct management approaches. The unique features of the sport ecosystem, the consumer engagement, the uncertain outcomes, the level of social interaction, the mixed human and financial resources and the emotional experience are factors that may explain this tendency. As per human resources (i.e., volunteers and staff), our results are again in line with those of Winand et al. (2013a) and Winand and Anagnostopoulos (2017) in terms of people in the organization having an attitude that favors change, the importance of staff being part of the decision-making process, and the innovative managers' behaviors. Regarding the relationships between professionals and volunteers and its impact in the innovation projects of the RFET, our results confirm previous findings from Madella, Bayle and Tome (2005) in which it seems that a key ingredient of success depends on the specific way the voluntary involvement can be really matched to the professionalization process.

In the case of the organizational level, the perception of the organizational culture, of innovativeness and the perception to lead change showed that the views on the perception of innovative leadership behaviors of the RFET leaders also are also similar to those found in the leaders of national federations by Harris, Metzger, and Duening (2020). Regarding the environmental level, in terms of competitiveness, our results are in line with those of Winand et al. (2013) related to the perception by the RFET and its stakeholders of external pressures in a competitive regional, national, and international environment with the organization having to compete for different types of resources (i.e., attraction of members and grants), which are scarce. The perceived competition context for membership participation, sport results, and financial support in which the RFET is operating as well as the cooperation and relationships with other organizations such as commercial providers, also coincides with that already mentioned by Newell and Swan (1995), Vos et al. (2012), and Winand and Anagnostopoulos (2017).

As per the perceptions of the COVID-19 impact in terms of the organization's capacity to innovate, it was shown that stakeholders perceived that the pandemic had negatively affected the structure and capacity to innovate of the RFET. Regarding the tennis and non-tennis services provided by the RFET as identified by the participants in the study, the main characteristics of most of these programs are similar to those already mentioned in the literature. Our findings support the views that innovation programs are implemented by NSGOs

in a variety of ways including processes, products, and technology services (Ferreira, Fernandes, Ratten, and Miragaia, 2020).

The main innovative programs implemented by the RFET are in line with those identified, among others, by Newell and Swan (1995) and Harris, Metzger, and Duening (2020:1) who indicated that NSGOs “*are expected to develop the talent pool, grow mass participation, safeguard athletes, educate coaches, secure sponsorships, and maintain relationships with a network of stakeholders from international to local level.*” The general views of the RFET stakeholders participating in the interviews are consistent to those reported by Winand et al. (2013a) who highlighted the relevance of both participation and high-performance programs of NSGOs. These authors also emphasized the importance of programs that promote sports values and retain and attract membership and financial support as marketing tools to differentiate, grow and survive. As per the non-tennis services, regarding the IT programs implemented by the RFET, our results coincide with those of Caza (2000) who reported two technology innovations (i.e., computer scoring and athlete ranking) used by a NSGB. Web platforms and apps are innovative solutions that are providing quality technological services to the stakeholders of these types of organizations.

In general, our results are also similar to those of Staškevičiūtė-Butienė, Valantinė and Eimontas (2016) who concluded that the new standards aimed to increase the quality of the products and services, to improve the speed and flexibility in responding to customers, and to innovate and constantly provide new products and services to the stakeholders are important aspects for sport federations.

## **12. Conclusion**

The findings in our study confirm our hypothesis that RFET stakeholders prefer tennis innovation programs over non-tennis ones and state the fact that the pandemic had affected the innovation capability of the RFET. These findings have theoretical and practical implications at management, organizational and environmental levels, as well as for the innovation programs of NSGBs.

From a theoretical perspective, our research summarizes, updates, and brings together theories, models, frameworks, and research conducted not only in innovation in sport but, more specifically, in NSGBs and in national sport federations to analyze the current state of the field and the relevance of its study. At management level, this study contributes to the literature on NSGBs need to stimulate innovations, take risks and to understand their unique characteristics that differentiate them from for profit organizations. At organizational level, implications that can be highlighted from this research are related to the drive for change that should be pursued by NSGBs as a key element of their culture, relationships, and reason to exist. The study contributes to the considerations that emphasize that NSGBs should be aware of the competitive ecosystem in which they operate at regional, national, and international levels. As it relates to

the COVID-19 pandemic, it has been shown how NSGB stakeholders perceive the important impact of this unprecedented scenario not only in their structure but, most importantly, in their capacity to innovate. Our research provides sport managers, volunteers, and researchers with further knowledge on the types of innovations which are usually more often provided by NSGBs, the sport-specific service innovations, by highlighting the specific characteristics of these programs and the concrete features that each one of them should have to become a tool for development, improvement, and change.

This study has several limitations even though the research questions, design, methodology and sample characteristics are not dissimilar to several previous research on this field. Regarding the sample, the findings on the specific characteristics of the sport federation analyzed may not be necessarily comparable to those of other sport federations. The number and selection of the participants in the questionnaire and in the interviews can also be considered as a limitation. In terms of operationalization of the innovations, just the type and not the magnitude of the innovation was considered. As mentioned, additional data resources were used to better understand the features of the different innovations implemented.

While our study provided findings on a type of NSGB not analyzed before, there are several lines of future research that can be considered. Future work can investigate other sport organizations both at national and international levels (i.e., International Federations). Studies can also compare these organizations based on size, sport, and market share (Smith and Green, 2020). Research can also focus on the magnitude (radicalness) of innovations and its impact on organizational performance (Winand et al., 2013a). Sociological, ethnographical, and human resources approaches could also provide interesting insights in the innovation processes of NSGBs (Smith and Green, 2020). Finally, a call for more research on specific sport and non-sport innovative services provided by NSGBs would be extremely helpful and practical for both leaders and executives.

The conclusions of this paper answer both research questions and contribute to focus the attention on NSGBs as innovator providers and to gain further knowledge on the innovation programs of a NSGB by revealing relevant findings related to its management, environment, and organizational levels. The perceptions of key stakeholders have provided a better understanding of the drive for change, the need for considering their views in the process, and the importance of a risk-taking, modern, and professional approach that favors innovation. Our results revealed a series of tennis and non-tennis specific services provided by the NSGB which attempt to fulfill the needs of the members while adapting to the competitive environment. The impact of COVID-19 in the innovative programs of the organization has also been discussed. This study is an initial step to further comprehend the creation and delivery of innovative services by an organization that has the mandate of governing a sport nationally.

### 13. Acknowledgements

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## **CAPÍTULO V. INNOVATION STRATEGIES IN SPORTS MANAGEMENT: COVID-19 AND THE LATIN AMERICAN TENNIS FEDERATIONS**

Crespo, M., Botella-Carrubí, D., Jabaloyes, J., & Simon, V. (2022). Innovation strategies in sports management: COVID-19 and the Latin American tennis federations, *Academia Revista Latinoamericana de Administración*.

El presente capítulo incluye una adaptación del artículo para la tesis.



## **1. Title:**

Innovation strategies in sports management: COVID-19 and the Latin American tennis federations

## **2. Abstract**

The purpose of this paper is to discuss some of the most relevant innovation strategies used by Latin American national tennis federations as a response to the COVID-19 pandemic. This paper describes the experiences within these organizations. The study uses a mixed methods design. It combines quantitative and qualitative measures with content analysis on the information provided by a sample of executives of national and regional tennis federations in Latin America plus Spain and Portugal. A sample of 19 professional executive staff members completed a survey in which they identified the main characteristics of the innovation programs delivered by their organizations during the pandemic and its impact on the overall strategy of their business. The findings suggest that a variety of innovation strategies have been used by these organizations during this unprecedented period. These strategies have been implemented in areas such as information, participation, communication, and digitalization. To the knowledge of the authors, this is the first paper that examines the innovative projects of the Latin American tennis organizational ecosystem. This research is limited by the sample size, which included several Latin American tennis federations, as well as by the special characteristics of the representatives of these organizations that participated in the study. The results provide practical implications as examples of best practices that can be considered by other sport organizations in their innovation strategies. The study also has social implications due to the impact of these innovation projects in the tennis ecosystem of the nations and the continent.

**3. Keywords:** organization, innovation, sport, tennis, management, COVID-19, pandemic, Latin America, federations

## **4. Abbreviations**

ITF – International Tennis Federation

NAs – National tennis associations or federations

NPSOs – Non-profit sports organizations

NSGBs – National Sport Governing Bodies

RAs – Regional tennis associations or federations

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## **6. Título**

Estrategias de innovación en la gestión deportiva: COVID-19 y las federaciones latinoamericanas de tenis

## 7. Resumen

El propósito de este trabajo es presentar algunas de las estrategias de innovación más relevantes utilizadas por las federaciones nacionales de tenis latinoamericanas como respuesta a la pandemia del COVID-19. Este trabajo describe las experiencias reales dentro de estas organizaciones. El estudio utiliza un diseño de métodos mixtos. Combina medidas cuantitativas y cualitativas con un análisis de contenido sobre la información proporcionada por una muestra de ejecutivos de las federaciones nacionales y regionales de tenis de América Latina más España y Portugal. Los 19 ejecutivos profesionales rellenaron una encuesta en la que identificaron las principales características de los programas de innovación llevados a cabo por sus organizaciones durante la pandemia y su impacto en la estrategia general de su empresa. Los resultados sugieren que estas organizaciones han utilizado diversas estrategias de innovación durante este periodo sin precedentes. Estas estrategias se han aplicado en áreas como la información, la participación, la comunicación y la digitalización. Según el conocimiento de los autores, este es el primer trabajo que examina estos proyectos innovadores en el ecosistema organizativo del tenis latinoamericano. Esta investigación está limitada por el tamaño de la muestra, que incluyó varias federaciones de tenis latinoamericanas, así como por las características especiales de los representantes de estas organizaciones que participaron en el estudio. Los resultados proporcionan implicaciones prácticas como ejemplos de buenas prácticas que pueden ser consideradas por otras organizaciones deportivas en sus estrategias de innovación. El estudio también tiene implicaciones sociales por el impacto de estos proyectos de innovación en el ecosistema tenístico de las naciones y del continente.

## 8. Introduction

Innovation in sport has been defined as the creation or application of a process, product or service in any form of change or novelty that leads to an increased competitiveness into a sports context (Ratten, 2018; Ratten and Ferreira 2017; Tjørndal 2016). Innovation is crucial for success in many scenarios. It has been indicated that those companies which implement management strategies that allow them to rapidly evolve and effectively get sustainable advantage from out innovating the competition are the ones that achieve organizational success (Moore, 1993; Tiberius *et al.*, 2021).

In the sport ecosystem, innovative organizations, such as the national federations, have been shown to embrace a culture of change, progress, evolution and development which affects all their stakeholders. As suggested by Winand *et al.* (2016) among others, by doing this, these organizations who govern their sport at national level have managed to better adapt and fulfil the needs of all those involved.

The leaders of these organizations are the national federations' professional staff. They are those responsible for delivering the services that implement the strategy of their organizations. This process is driven by their leadership and

their ability to facilitate an innovative culture within their context (Skinner *et al.*, 2018; Taques *et al.*, 2021).

As one of the most popular sports in the world, tennis attracts players, fans and media audiences. It is played by 87 million people worldwide, which represents 1,17% of the total world population. 45% of these players are female, which indicates that it is a truly equal gender global sport with a significant presence in the continents formed by the Latin American nations (ITF, 2019).

Tennis, as well as other sports, has been notably affected by COVID-19 pandemic. National federations have tried to react and adapt to this phenomenon by positioning tennis as one of the safer activities to practice due to the fact that it allows social distancing while playing (ITF, 2020). The overall effects of this unprecedented and challenging scenario in the tennis ecosystem are still to be fully studied and understood (Crespo and Jabaloyes, 2020).

Researchers have paid considerable attention to innovation in the sport context, see for all Ratten (2018) and Ringuet-Riot and James (2013). Less interest has received the innovation conducted by national sports federations (Winand *et al.*, 2013) and very few studies have focused on the role of the staff of these organizations in the implementation of innovation strategies (Winand and Anagnostopoulos, 2017). In the case of tennis, innovation research has mostly focused on the role of technology (Kim and Pennings, 2009; Sheridan, 2006). For a general overview, see Crespo *et al.* (2021). The specific innovation strategies of national tennis federations have not yet been investigated.

As per research related to innovation, sport and COVID-19, authors such as Ratten (2020) reflected on the new thinking required by sport organizations to capitalize on the use of innovation to adapt and react to the situation, and Ratten and Dickson (2021) have discussed the disruptions in sports management created by the pandemic. In the tennis ecosystem studies have focused on several aspects related to the different stakeholders, see Crespo *et al.* (2021) for a review. However, as above mentioned, no studies have investigated innovation and COVID-19 in the context of tennis national federations worldwide or in Latin America through the views of their executives.

Therefore, the purpose of this paper is to identify and discuss some of the most relevant innovation strategies used by the Latin American national tennis federations as a response to the COVID-19 pandemic. This will be done by analyzing the actual experiences within these organizations as obtained through the information provided by the different national tennis federations and some of their executive professional management staff members.

This paper will have the following structure: after this introduction, a theoretical background will set the scene of the research context. This will be followed by the methodology section, the results, and the discussion parts. Finally, the limitations, practical applications and future directions of research will be presented together with the conclusions at the end of the paper.

## 9. Theoretical background

### 9.1. *Innovation in sport and tennis organizations*

Innovation has been understood as a chaotic, complex, iterative and social process that implies the adoption of new practices, structures, or technologies (Wolfe, 1994). Innovation in sports specifically refers to the adoption and use of a novel idea or behavior and its application to sports context (Winand and Hoerber, 2017).

Research on innovation in sport settings has growth during the last decades and it has covered many aspects that define the complexity of the sport ecosystem. Studies have focused on technology, entrepreneurship, sustainability, digitalization, network models, opportunities, social aspects, communication, management, organizations, etc. (for a review see Tjørndal, 2016).

More specifically, the field of innovation in sport organizations has received some attention from research. Sports organizations are complex sociotechnical systems which implement strategies directed to the growth and development of the sport on which a range of organizational factors interact to influence athlete performance (Fletcher and Wagstaff, 2009).

Theoretical models that have addressed this topic include that of Newell and Swan (1995) related to the diffusion and appropriation processes of innovation within National Sport Governing Bodies (NSGBs), the model of innovation champions by Winand *et al* (2013), and the model of innovation capability of Non-Profit Sport Organizations (NPSOs) proposed by Winand and Hoerber (2017). Results on research related to innovation of NSGBs have provided an interesting view of the challenges these organizations should face and the policies, strategies, and programs to fulfill their stakeholders needs (see Crespo *et al.*, in press).

In this context, tennis is a multifaceted activity that can be considered a global industry and a business with many ramifications. It has been suggested that tennis has an innovation strategy since it is committed to develop ideas and implement innovative practices (Crespo and Jabaloyes, 2020) and, for innovative processes, tennis is especially seen as a favorable scenario (Crespo *et al.*, 2021). The tennis executives have been identified as key drivers of innovation strategies in this ecosystem (Valiño, 2017).

In fact, innovation through digitalization is one of the main objectives of the International Tennis Federation (ITF) 2020-2024 strategy (ITF, 2021a) since its focus on innovations in tennis includes player analysis technology, electronic line calling, and research into the state of the game with the goal of ensuring that tennis remains true to its traditions in an ever-evolving world.

Technological innovations have been the main focus of research on innovation in tennis as they have studied products (i.e., rackets, balls, clothing, strings, etc.) created to increase the players' experience (Crespo *et al.*, 2021). It could be then stated that management innovations of NSGBs would need more attention due to the relevant role this organizations play in the governance of the sport.

Apart from innovation, there are many other relevant topics that tennis federations are facing as part of their management strategies and that could be linked to the sports context. Among these, aspects such as Corporate Social Responsibility (CRS), sustainability, digitalization, gender equality, inclusion, integrity, governance, safeguarding, etc., are crucial for an adequate development of these and other organizations (Martín & Fernández, 2022) even more now in the COVID-19 scenario (Guaita *et al.*, 2022). However, these topics are outside the scope of this research which, as indicated above, deals with innovation strategies in these challenging times.

## 9.2. *National tennis governing bodies in Latin America*

From an international governance perspective, and according to the ITF Constitution (ITF, 2021b), National Associations are “*National Tennis Associations or corresponding organizations of independent countries or territories that are member states of the United Nations or members of their National Olympic Committee*” (p.6). The national tennis associations or federations (NAs) are the governing bodies of tennis in their respective nations. They are affiliated to the ITF which is the world governing body of tennis. They are also affiliated to their respective Regional Associations (RAs). There are some 210 affiliated NAs affiliated to the ITF.

As suggested by Bayle and Robinson (2007) they are usually not-for-profit sport organizations. Their role is to govern and manage their sport in their territory by implementing strategies and policies to plan, organize, regulate and deliver sport activities to their stakeholders. They accomplish this role by articulating a variety of administrative methods to achieve their organizational goals. These activities are conducted by a combination of volunteers and paid staff that provide them with a ‘hybrid’ nature due to their social scope, mixed source of funding (public and private), and network structure of operation which may include regional/provincial federations and clubs (Naraine and Parent, 2017).

According to the ITF (2021b), tennis in Latin America is governed by two Regional Associations (RAs): COSAT and COTECC, which are affiliated to the ITF. COSAT is the South American Tennis Confederation, which is made up of 10 nations: Colombia, Venezuela, Ecuador, Peru, Bolivia, Argentina, Brazil, Chile, Paraguay, and Uruguay (COSAT, 2020). COTECC is the Confederation of Tennis for Central America and the Caribbean, and it has 34 member nations. For the study, the 10 Spanish-speaking nations of this sub-region were included. These nations were: Costa Rica, Cuba, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Puerto Rico, and Dominican Republic.

From a tennis participation perspective, data from the ITF (2019) indicate that the Latin American countries have close to 5% of the world's tennis population (4.8%) totaling 4,2 million tennis players. The percentage of the total population in this region that plays tennis is 0.31%. As per gender balance, 27.6% is the percentage of female tennis players in the region. The countries in the region with more players include Brazil (2.3 million), Argentina (1 million), Mexico (0.6 million) and Colombia (0.2 million). These four countries have close to 99% of the total tennis population in the region.

In terms of tennis clubs, the region has around 6,000 clubs, which account for the 8.5% of the total number of tennis clubs in the world, with Brazil, Mexico, Colombia and Argentina as the nations in the region with more clubs. Regarding tennis courts, the region has close to 15,000 courts which is approximately 3% of the tennis courts in the world. It has also a population to tennis court ratio of approximately 33,000 people per court. Brazil, Argentina and Mexico are the nations in the region with more courts.

As per data on tennis coaches, Latin America has a total of approximately 16,000 coaches which is around 10.1% of the total number of coaches worldwide. Furthermore, the ratio of tennis coaches to tennis players is approximately 4 per 1,000. Brazil, Argentina, and Colombia are the nations in the region with more coaches.

During the last decades, tennis has gained considerable popularity in some Latin American nations. This is the case of Brazil, mainly due of the charisma of great champions like Gustavo Kuerten (Urso *et al.*, 2015). The same situation applies to other nations such as Argentina and Colombia which shows the long-standing tradition of the game in the region (Crespo *et al.*, 2021).

Although tennis is known to a large part of the Latin American population, there is a major challenge which relates to its practice by an increasing number of people in a changing and difficult environment. This is being addressed with the appropriate policies that look to provide support to initiatives that increase both the number of tennis venues and tennis deliverers. As pointed out by Bocketti (2017) in this combination of national identities, it is relevant to reflect about the support to be provided to favor structural changes that will help achieve an alliance between the public and the private sectors. The policies, programs and projects based on innovative strategies should have participation as the key developmental objective in this region.

### 9.3. *Tennis and COVID-19*

According to Crespo *et al.* (2021) tennis has been considered as one of the leading sports in the world in effectively dealing COVID-19 mainly due to the social distancing nature of the game that allows its practice. Tennis organizations have joined efforts, informed their stakeholders, provided assistance where most needed, adapted venues, calendars and activities, and are continually looking at new ways to enable people to access the sport.



Tennis NAs have engaged with players, coaches, clubs, tournaments, and staff by working together in a close, albeit virtual, relationship. They have created or adapted guidelines, policies and contents to guide the stakeholders to carefully get tennis down the road to recovery up and running again. They have also followed the appropriate advice from the relevant authorities by prioritizing the health and safety of all those involved (ITF, 2020).

Data from latest market research conducted by the United States Tennis Association (USTA) and Tennis Australia, indicate that tennis is one of the sports that is coming out of a pandemic stronger than others. For instance, despite an 80% decrease in the 2020 operating income of the USTA, there have been increases of 22% in the US and 10% percent in the tennis playing population (USTA, 0221).

Within this context, research on COVID-19 and tennis has focused on areas such as professional tennis (King, 2020; Kowalik and Lewandowski, 2021; Slater and Watkins, 2020), player training (Bonavolontà *et al.*, 2020), community tennis (Turner *et al.*, 2021), and coaches' perceptions (Crespo *et al.*, 2021).

Due to the relevance of the sport, the role of the NAs in Latin America, the impact of the pandemic, and the lack of studies on innovation in tennis NAs, it was considered interesting to study the innovation strategies in sports management of the tennis NAs in the region during the COVID-19.

The research questions of this study were the following: which are the attitudes and perceptions of the executive professional staff of the NAs towards innovation in this unprecedented situation? And which are the most innovative strategies, programs or projects implemented during this period?

The three hypotheses tested in this study were the following: 1. Executives with higher education levels would be more open to innovation and change than those with lower education levels in these challenging times; 2. The executives would consider that the COVID-19 pandemic had a considerable impact on the innovation capability of their organizations, and 3. NAs would tend to implement tennis-specific programs over non-tennis ones as means of innovation.

## **10. Methodology**

The first author's involvement in tennis was the base for the collection of the data used for this research. The study used a mixed methods design. It combined quantitative and qualitative measures with content analysis on the information collected. Data was collected from a questionnaire and the analysis of content produced by the organizations.

An online survey used by Crespo *et al.* (in press) adapted to tennis from the one by Winand *et al.*, (2013) was used. The survey consisted of three sections apart

from the consent one: a general descriptive part, one with 30 questions to assess attitudes and perceptions, and a final section which included open questions.

The second section of the questionnaire was structured in three levels (managerial, organizational and environmental) which included different subcategories of each level to assess the attitudes and perceptions using a Likert scale (1 = completely disagree to 5 = completely agree) in the 30-item questionnaire (Table 1). See Winand et al. (2013) for a full description of the original questionnaire and Crespo *et al.* (in press) for the specific details of its adaptation to tennis.

Table 1. Levels, categories, sub-categories, and items of the survey.

<b>Levels and categories</b>	<b>Sub-categories</b>	<b>Items (n=29)</b>
<b>Managerial level determinants</b>		
<b>Attitude towards traditional management</b>	Bureaucracy	37. The structure and responsibilities of the NA are unlike private firms
	Inflexible structure	38. In the COVID-19 scenario, a traditionally formal and hierarchic administrative model in the NA is preferable to a flexible and less structured model
	Against change	39. Change to the internal functioning of the NA can be counterproductive in a context such as that of COVID-19
<b>Attitude favoring change and newness</b>	Investment in new services	5. More financial investments (even risky) should be achieved by the NA to develop new services for members in the context of COVID-19
		6. The NA should invest in the development of new services due to the situation created by COVID-19
	Risk taking	7. To achieve their goals, the NA should take even more risks due to COVID-19
	Openness to change	8. Change is globally a good thing for the NA even in the situation created to COVID-19
	Openness to members' expectations	9. The NA should deliver the new expectations of their members created by COVID-19
	Openness to club's suggestions	10. Suggestions of clubs should be taken into account by the NA even more now in the situation created by COVID-19
	Openness to staff suggestions	11. Paid NA staff have ideas that the NA should take into account even more now in the situation created by COVID-19
	Professional management	12. The NA should be managed like business firms even more now in the situation created by COVID-19

<b>Attitude towards contemporary management</b>		13. It is important that the NA has a clear mission and vision statement even more now in the situation created by COVID-19
	Involvement in decision making processes	14. NA paid staff should be involved in the decision-making processes even more now in the situation created by COVID-19
<b>Organizational level determinants</b>		
<b>Perception of organizational culture</b>	Culture and relationships	15. NA has an organizational culture and relationships between volunteers and paid staff that favors innovation even more now in the situation created by COVID-19
<b>Perception of innovativeness</b>	General	16. The NA is innovative even more now in the situation created by COVID-19
	Specific services	17. The NA provides innovative services, programs, products, and events even more now in the situation created by COVID-19
	Strategies and policies	18. The NA has coherent strategies and policies in place geared towards innovation even more now in the situation created by COVID-19
<b>Perception of ability to lead change</b>	Leadership within the organization	19. The NA has an organizational ability with their volunteers and staff to lead the change even more now in the situation created by COVID-19
	Leaders' champions	23. There is a clear commitment from the NA volunteers to innovate in tennis even more now in the situation created by COVID-19
<b>Environmental level determinants</b>		
<b>Perception of pressures</b>	External pressures	21. There are external pressures to the NA to change and innovate even more now in the situation created by COVID-19
	Attraction of members	20. NA competes with other sports federations to attract members even more now in the situation created by COVID-19

<b>Perception competitive environment</b>	<b>of national</b>	Attraction of grants	22. NA competes with other sports federations to attract grants even more now in the situation created by COVID-19
		Competition with commercial sports providers	24. Commercial sports providers are a threat to the NA's growth even more now in the situation created by COVID-19
<b>Perception cooperative environment</b>	<b>of</b>	Cooperation with other organizations	25. The NA cooperates with other tennis and non-tennis organizations to innovate even more now in the situation created by COVID-19
<b>Perception competitive environment</b>	<b>of regional</b>	Sport rivalry between regional sport federations	26. There is rivalry between the different regional tennis federations even more now in the situation created by COVID-19
<b>Perception competitive international environment</b>	<b>of</b>	High-level sport competition	27. International rivalry between national sports federations is increasing even more now in the situation created by COVID-19
			28. International rivalry between national tennis federations to obtain international results is high even more now in the situation created by COVID-19
<b>Perception of COVID-19 impact</b>		Impact on the strategy and structure	29. COVID-19 has negatively affected the strategy and structure of the NA
		Impact on the capacity to innovate	30. COVID-19 has negatively affected the innovation capacity of the NA
		Impact on the budget	40. COVID-19 has caused a reduction of the NA budget

The third section of the questionnaire consisted of questions with open answers in which participants had to indicate both tennis and non-tennis specific innovative actions implemented by their organizations during this period (Table 2). This was adapted to tennis from the one by Winand *et al.* (2013) and used by Crespo *et al.* (in press).

Table 2. Levels, categories, sub-categories, and descriptors of programs of tennis and non-tennis services that a NA can offer to their stakeholders.

<b>Level and categories</b>	<b>Sub-category</b>	
<b>Tennis services</b>		
<b>Player development</b>	Participation / grassroots tennis	Programs for players of different categories (i.e., 10, 12, 14, 16 and 18 and under, adults and seniors).
	Performance / competition	Programs for players (i.e., sports policy, talent selection, training, “camps”, scholarships, etc.).
<b>Competitive structure</b>	Tournaments	Leagues, circuits, championships (i.e., organization, assistance, promotion, etc.).
<b>Policy</b>	Rules	Regulations, procedures for tennis play (i.e., amateur license, COVID-19, etc.).
<b>Education</b>	Activities	Education programs for coaches, referees, administrators (i.e., courses, conferences, congresses, publications, etc.).
<b>Non-tennis services</b>		
<b>General</b>	Management	General management and administration (i.e., procedures, registrations, sign-ins, etc.).
<b>Marketing</b>	Communication	Marketing and communication (i.e., campaigns, initiatives, etc.).
<b>Resources</b>	Equipment	Facilities and equipment (i.e., scholarships, grants, guidelines, etc.).
<b>IT</b>	Communications	ICT services (i.e., networks, platforms, etc.).
<b>Other services</b>	General	Other services (i.e., services provided but not included in the previous sections).

The analysis of relevant documents available in the websites of the different organizations also provided further data and details to complement this last section of the questionnaire (Saura, 2021).

As per the sample of the study, innovation in tennis is driven through many organizations and individuals. For this study, the organizations identified were a group of tennis NAs and RAs in Latin America plus Spain and Portugal. As per the individuals, those selected were the professional staff members of these organizations. They were considered innovation leaders since they lead the way in the process of change of the different organizations. It was considered that they could provide valuable information for the purposes of the research. The education level of the members of the sample was considered an appropriate criterion to differentiate the participants because it could considerably affect their views on innovation and management strategies and programs. Practical experience in the tennis environment suggests that in the case of tennis executives working for NAs, some of them come from pure tennis backgrounds with no education, whereas others may come from more academic backgrounds related to management or business administration educational pathways.

Regarding the period of the study, the questionnaire included a specific mention to the innovative activities implemented during the COVID-19 pandemic.

The levels, categories, sub-categories and items included in the questionnaire are shown in table 1. There were 3 categories and 11 sub-categories at the managerial level, 5 categories and 9 sub-categories at the environmental level, and 3 categories and 6 sub-categories at the organizational level. Two levels (tennis and non-tennis) with 4 categories each one were included in the open section of the questionnaire.

The statistical analysis was carried out using SPSS v. 26. The Kolmogorov-Smirnov test was used to test the normal distribution of the variables. Since it was found that data did not distribute normally, non-parametric tests were used. The differences based on the executives' experience was tested with the Mann-Whitney U test. The significance level was established at 0.05. For all comparisons the size of the effect was calculated using eta-squared. Small effect values were considered  $0.01 < \eta^2 < 0.06$ , moderate effect values were considered  $0.06 < \eta^2 < 0.14$  and large effect values were considered  $\eta^2 \geq 0.14$ .

The analysis of the data collected in the open section of the questionnaire consisted of the extraction and coding by level, category and sub-category. Key terms, which generated descriptions of initiatives or projects, were matched with the programs of the several NAs. The most cited innovative program in each category was considered the preferred one as relevant criterion in this section.



## 11. Results

The results on the general descriptors, on the statistical analyses and on the most relevant innovative programs put in place by the Latin American RAs and NAs in the period of the pandemic are included in this section.

Nineteen professional staff members (14 males and 5 females) of ages  $44.58 \pm 10.68$  representing 19 RAs and NAs of Latin American nations plus Spain and Portugal took part in the study. The response rate for representatives of Central America as well as for Spain and Portugal was of 100% since all NAs plus the RA completed the questionnaire. In the case of South America, the response rate was of 60%. The response rate was considerably high because the authors followed a strict monitoring strategy by constantly following up the replies to ensure that all participants that received the questionnaire did complete and return it. As per years of experience as a tennis executive, 57.1% had up to 10 years, 33.3% had from 11 to 20 years and 9.5% had more than 21 years. In terms of education level, 52.6% of the sample had an education level up to university degree or less, and 47.3% had a master's degree or higher.

As indicated above, for the analysis, it was considered that the education level was an appropriate criterion to differentiate the members of the sample. The results and the significant differences between the two groups according to the education level of the executives are shown in Table 3.

Table 3. Results and significant differences between the two groups according to the education level of the executives.

	<b>No Degree / PhD (n=10)</b>	<b>Master's Degree / PhD (n=9)</b>			
<b>Item</b>	Median (IR)	Median (IR)	U- Mann- Whitney	p	$\eta^2$
<b>1</b>	5.00 (2.00)	3.00 (2.00)	30.00	0.24	0.08
<b>2</b>	4.00 (4.00)	2.00 (2.00)	30.00	0.24	0.08
<b>3</b>	3.50 (2.00)	2.00 (3.00)	32.50	0.32	0.06
<b>4</b>	5.00 (1.00)	5.00 (1.00)	41.00	0.78	0.01
<b>5</b>	5.00 (1.00)	3.00 (2.00)	26.00	0.13	0.13
<b>6</b>	5.00 (1.00)	4.00 (2.00)	28.50	0.18	0.10
<b>7</b>	4.00 (2.00)	3.00 (1.00)	30.50	0.24	0.07
<b>8</b>	4.00 (2.00)	3.00 (2.00)	31.50	0.28	0.06
<b>9</b>	5.00 (1.00)	4.00 (2.00)	25.00	0.11	0.14
<b>10</b>	4.00 (1.00)	4.00 (2.00)	39.00	0.66	0.01
<b>11</b>	5.00 (1.00)	4.00 (1.00)	43.00	0.91	0.00
<b>12</b>	5.00 (1.00)	5.00 (2.00)	39.50	0.66	0.01
<b>13</b>	5.00 (0.00)	5.00 (1.00)	39.00	0.66	0.01
<b>14</b>	5.00 (0.00)	4.00 (1.00)	18.00	0.03*	0.26
<b>15</b>	4.00 (2.00)	4.00 (1.00)	41.50	0.78	0.04
<b>16</b>	4.50 (1.00)	4.00 (2.00)	28.50	0.18	0.10
<b>17</b>	4.00 (1.00)	3.00 (2.00)	23.00	0.08	0.17
<b>18</b>	4.00 (2.00)	4.00 (2.00)	37.50	0.55	0.02
<b>19</b>	4.00 (1.00)	4.00 (2.00)	31.00	0.28	0.07
<b>20</b>	3.00 (2.00)	4.00 (2.00)	28.00	0.18	0.10
<b>21</b>	3.00 (1.00)	3.00 (2.00)	41.50	0.78	0.00
<b>22</b>	3.00 (2.00)	4.00 (2.00)	37.00	0.55	0.02
<b>23</b>	5.00 (2.00)	4.00 (2.00)	36.50	0.50	0.03
<b>24</b>	2.00 (1.00)	3.00 (2.00)	27.00	0.16	0.11
<b>25</b>	5.00 (1.00)	4.00 (3.00)	26.00	0.13	0.13
<b>26</b>	4.00 (2.00)	3.00 (2.00)	17.00	0.02*	0.28
<b>27</b>	3.00 (2.00)	3.00 (1.00)	37.50	0.55	0.02
<b>28</b>	3.00 (1.00)	3.00 (1.00)	45.00	1.00	0.00
<b>29</b>	4.50 (3.00)	4.00 (1.00)	43.00	0.91	0.00
<b>30</b>	3.00 (3.00)	3.00 (3.00)	35.00	0.45	0.04

Regarding the first hypothesis: 1. Executives with higher education levels would be more open to innovation and change than those with lower education levels in these challenging times; Two sub-categories of the managerial and environmental level determinants showed significant differences between executives of both groups. In the management level, the results in the attitude towards contemporary management category showed that the executives with lower education level perceived that they should be more involved in the decision-making processes of their tennis organizations than those with a higher education level. Furthermore, in the perception of competitive regional environment category of the environmental level, the executives with lower education level perceived that there was more rivalry between the different provincial and regional federations within their nations than those with a higher education level. No significant differences between the two groups of executives were found in the organizational level determinants.

Further results at the managerial level showed that executives had a positive perception of an attitude favoring change, being open to staff, club and member expectations and suggestions, and to contemporary management which included the need for an innovative strategy in the organizations. At organizational level, the results showed a favorable perception of innovation in the organizational culture, in the strategy, in the policies, in the ability and commitment of the leaders as well as in the services and products offered by the tennis organizations. At environmental level, executives in the sample did not perceive private companies as a threat to their organizations but had a favorable perception of the cooperation with other organizations.

As per the second hypothesis: The executives would consider that the COVID-19 pandemic had a considerable impact on the innovation capability of their organizations. The executives of the NAs perceived that the pandemic had affected considerably the strategy, structure, and budget of their organizations. It was also felt that the tennis organizations should invest more in creating and developing innovative services even in these times. However, there was no consensus on the perception of its impact on the innovation capability of the NAs.

Regarding the third hypothesis, NAs would tend to implement tennis-specific programs over non-tennis ones as means of innovation. In terms of the projects and initiatives delivered, the most cited innovative programs of the different Latin American tennis NAs implemented during the pandemic period are included in Table 4. The classification in levels, categories and sub-categories is also shown.

Table 4. Most cited programs or services provided by the Latin American tennis NAs in the period of study as identified in the questionnaire and further described in the interviews.

<b>Level and categories</b>	<b>Sub-category</b>	<b>Most cited program or service</b>
<b>Tennis services</b>		
<b>Player development</b>	Participation	Tennis at home
	grassroots tennis	
	Performance	Talented tennis kids' programs
	competition	
<b>Competitive structure</b>	Tournaments	Events for players of all age groups
<b>Policy</b>	Rules	COVID-19 regulations
<b>Education</b>	Activities	Online courses and conferences
<b>Non-tennis services</b>		
<b>General</b>	Management	Stakeholder services
<b>IT</b>	Communications	Strategy and initiatives

Tennis services projects as compared to the non-tennis ones are the most cited innovation activities. The results on the two most popular tennis services (i.e., in the participation and rules sub-categories) and on the most popular non-tennis service (i.e., in the communications sub-category) will be explained.

An innovative program identified in the player development category and in the participation sub-category was that of “tennis at home”. This was the alternative program implemented by some NAs to deliver on-court tennis activities for junior tennis players during the lock down period.

As indicated by the general sports manager of one of the NAs involved: *“We had a tennis program for each of the age categories, but COVID has not allowed its implementation due to the strong measures taken by the government. Therefore, we tried to continue with the activity organizing new sessions and competitions mostly for junior players who were at home”* (Manager, 8).

These sessions were delivered online using a digital platform. The follow up was done using social media tools such as WhatsApp or Facebook. In some of the cases, the virtual sessions were delivered during more than 5 months (FNTG, 2021).

One of the organizers stressed the fact that it had been a team effort: *“We want to express our greatest gratitude to all those parents, siblings, cousins, aunts and grandparents for their participation and support during the virtual classes. Their collaboration in the project was important not only for us but also for the tennis players at home; to whom we assure that they learned and developed new technical and tactical skills in the sport of tennis. We would especially like to congratulate all the coaches from the different regions of the country who were always willing to contribute to this project”* (Manager, 3).

The other innovative program in the tennis category, which was part of the policy sub-category, was that of the publication of rules and regulations related to tennis and the pandemic. Most of the Latin American tennis NAs have produced protocols to provide basic guidelines for the safe practice of tennis in the environment of the COVID-19 pandemic. These guidelines are for application before, during and after the practice of the sport. Its implementation is suggested both at recreational and professional level, either in social and sports clubs, private courts, or individuals (AAT, 2021).

As indicated by the director of participation of one of the NAs: *“We have engaged all those involved in tennis (players, teachers, physical trainers, court maintenance personnel, tennis administrative personnel, managers) to get familiar with the protocol. Each club may develop its own protocol, adapted to local recommendations. The NA has prepared this guide to share the knowledge that allow a responsible development in the current context, minimizing any instance of contact and possibilities of contagion, both for those who practice our sport as well as for the professionals involved in the practice of our sport”* (Manager, 11).

Finally, the non-tennis program identified as an innovation by the executives of the Latin American tennis NAs was that of the communication strategy of the organization during the pandemic. This communication was mainly implemented through digitalization programs.

The CEO of one of the Latin American tennis NAs in the sample explained: *“Everything online has increased exponentially. Thus, the National Association has a clear strategy emerging from the communications department to provide as much information as possible to the public about all tennis activities in the country”* (Manager 2).

These results confirm the fact that the management of tennis NAs in the region is rapidly moving online and that many of the NAs base their communication strategies on digital solutions that provide value to their clubs and coaches.

Another executive stated: *“The NA is seeking to explore the role it can play in providing communication and digital services to all stakeholders that need support, enabling significant improvements in the way tennis is shown to the different segments of consumers. For instance, a new social media communication program is based around the concept of gender balance in tennis”* (Manager, 15).

## **12. Discussion**

The results on the executives' perceptions on the managerial level categories related to an attitude favoring change, innovativeness and need for considering the views and expectations of the different stakeholders are in line with those obtained with Spanish tennis coaches by Crespo *et al.* (in press) and by coaches

in general (Ferkins *et al.*, 2005) who were favorable to the professionalization of their federations.

The results related to the executives' perception of the impact of the pandemic on the NAs are similar to those found by Tennis Europe (2020). The European nations reported that inevitably, all nations had suffered financially in these uncertain times. However, executives expressed that their organizations had certain capacity to innovate as it has been shown that tennis is one of the few sports that has increased in participation following the outbreak due to the increased demand for courts and equipment (USTA, 2021). In this context, authors such as Valiño (2020) also stated the need for the appropriate adaptation and respect to the guidelines to ensure a safe practice.

Our results have also shown that, in general, the executives of the Latin American tennis NAs identified innovative tennis services and programs over non-tennis ones. These findings are in line with those obtained from Crespo *et al.* (in press) who collated perceptions from tennis coaches of innovative programs of NAs and concluded that coaches in the sample also prioritize tennis programs over non-tennis ones.

The most cited tennis program has been that of “tennis at home”. This result is in line with the programs identified as innovative by other NAs (Tennis Europe, 2020). In fact, these European NAs had indicated that one of the main concerns of tennis NAs is the delivery of grass roots tennis programs as part of their drive to increase participation in tennis. The specific programs identified by this NAs are those that include initiatives by clubs and local coaches and programs for kids aged 10 and under and free beginner lessons.

These participation programs are also mentioned by Smolianov *et al.* (2014) as the ones most suitable to achieve an integrated development of mass participation and high performance. They are the ones carried out by NAs, which are seen to have the greatest impact on the sport. Bonavolontà *et al.* (2020) also found that tennis organizations used virtual sessions to continue the educational relationship between coaches and young tennis players during the outbreak to retain participation in tennis.

Regarding the policies issued by these organizations to face the pandemic, the results of our study have also shown that Latin American tennis NAs believed in the value of policy information and in the provision of support to their stakeholders with recommendations, best practice examples and guidance on how to ensure the safest tennis practice possible. The protocols produced by the different NAs have facilitated the return to tennis during the COVID-19 pandemic by mitigating the risk of exposure to, and spread of, the virus.

These results are also very similar to those reported by the ITF (2020). The delivering of global digital transformation is a key objective of the ITF 2024 strategy. Its digital communication strategy represents an important step on the ITF's journey to increase the global tennis-playing population.

The information provided by these organizations is part of their communication strategy which is vital to develop and promote tennis around the world. These results are close to those obtained by Thompson *et al.* (2014) who examined the development of the social media strategy of a tennis NA. These authors recommended the use of creative online strategies to ensure they meet the needs and expectations of all stakeholders by constantly engaging with members and fans.

On the professional tennis environment, King (2020) also acknowledged the role of efficient communication from tennis organizations in their response to COVID-19. The author concluded that the tennis ecosystem produced a combination of strategies in this scenario due to the divided nature of the game from a governance perspective. Gender issues were studied by Kowalik and Lewandowski (2021) as related to the aversion to the exposure to the pandemic in professional tennis evidencing the relevance of this topic.

In general terms, it can be stated that the results of our study are in line with those also found by Naraine and Parent (2017) who concluded that NSGBs are certainly not exempt from the impact of market forces and trends, including innovations and technological advancements.

### **13. Conclusions**

A considerable amount of research in the study of innovation in the tennis domain has focused on the technological and product innovations produced by the different stakeholders. Less attention has received the innovation of tennis organizations, and even less, the research on innovation strategies of tennis NAs as perceived by their stakeholders.

This study is the first one to analyze the behaviors and perceptions of professional staff members of tennis NAs in Latin America and their views on the programs implemented by their organizations to face the COVID-19 pandemic.

#### *13.1. Practical applications*

Several practical applications can be drawn from this study. The results demonstrate that, although traditional management, organizational and administrative behaviors are still present in the tennis ecosystem, a more innovative mentality should be present in these organizations. Therefore, it is relevant that sport and tennis organizations commit to the implementation of innovative strategies for the optimization of the management of their ecosystems.

From a practical perspective, NAs executives can use the results and conclusions provided in this study to change, evolve, innovate, and adapt their organizations to the new developments and trends in sport. This can be done by

reflecting on possible programs and projects shared in this research that could also be implemented by their organizations.

Results have also shown that, the impact of COVID-19 has been considerable on the organizations of the sample. However, data also have shown that the innovative tennis programs put in place have achieved considerable results on the participation side. This can be an important lesson to learn when implementing programs in the future.

The views of the executives participating in the sample have been used in this study to better understand the innovation perceptions and behaviors of an important group of stakeholders of tennis NAs. Specifically, executives with lower education levels expressed their wish to be more involved in the decision-making process of the organizations and perceived that there was more rivalry between the different provincial and regional federations within their nations that did those with a higher education level. These organizations should acknowledge the work done by these executives, together with that of the volunteers, and try not to undervalue or overlook them since, as mentioned, they are the ones that implement and deliver the innovation strategies of these organizations.

Finally, we consider that it is also relevant to highlight the possible applications of the conclusions of this study to the business world. Even though our research was focused on national tennis federations and its context is the sports environment, some of the results can be extrapolated to organizations with profits seeking, that is, companies. Specifically, the focus on the adaptation and innovation of the projects to face challenging times such as the one created by the COVID-19 pandemic as well as on the provision of programs and initiative that focus on increasing participation and retention of customers.

### *13.2. Limitations and future research-based considerations*

There are limitations of this study that need to be mentioned. The first limitation relates to the sample size of executives who completed the questionnaire. Although the study obtained an evenly distributed sample of executives from many Latin American tennis NAs, it would have been beneficial to have included at least another executive staff member from each organization. This would have helped to present another view from the same organization. The second limitation refers to the details provided in the open section of the questionnaire. Specifically, the space allocated for the answers and the degree of detail required could have been optimized by providing more space to provide the answers and further instructions on the importance of facilitating information related to the specific implementation of the programs, their development, and their impact on the respective stakeholders.

Future research-based considerations include the need for expanding the study to other regions and continents. By doing so, it would be possible to compare the innovative strategies implemented by the tennis NAs worldwide and reflect



on geographical, cultural, or societal influences and differences. Furthermore, the possibility of conducting studies with other samples of stakeholders, such as volunteers, coaches, referees, or players, who could provide different views is encouraged. Finally, the need for analyzing more in depth the specific characteristics of the innovative programs implemented during the pandemic would provide further insight on how operations can be optimized, and results evaluated.

### *13.3. Final remarks*

The unprecedented situation created worldwide by the COVID-19 pandemic has generated considerable uncertainty. Important conclusions from the study are that Latin American tennis NAs have implemented a wide variety of initiatives, focused on both participation and performance players, and that many if not all of them are services, and not products, that involve some sort of technological web-based innovation.

As it has been shown in this research, NAs have reacted to the situation by effectively adapting through a variety of innovative projects. A combination of flexible and creative initiatives has helped the tennis community to face the challenges and risks of the disruption. Some of these innovations are related to the tennis specific competences or functions they should deliver, whereas other sit outside the expected functions of organizing and managing tennis. The extraordinary determination of the innovations put in place has helped tennis to position itself as one of the safest sports to play in the actual circumstances.

The results of the study will help all those interested in having insight on the different alternatives NSGBs have to apply an innovation strategy to their organizations to meet the expectations and needs of their respective sport ecosystems. From the perspective of national sports organizations in general and national tennis federations in particular, the results and conclusions of this research have shown the need to continue the study of the programs, structures, systems, and policies designed by sports such as tennis to attract, retain and motivate participants and fans in complex scenarios.

We hope that this article has provided an overview of the complex nature of innovation in a sport management setting such as a national tennis federation in a region, Latin America, that has an enormous potential to grown in this sport.

## **14. Acknowledgements**

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## **CAPÍTULO VI. HOW DO INTERNATIONAL OLYMPIC SPORT FEDERATIONS INNOVATE? THE USE OF CROWDFUNDING AND THE IMPACT OF COVID-19**

Crespo, M., Botella-Carrubí, D., Jabaloyes, J., & Martínez-Gallego, R. (2022). How do International Olympic Sport Federations innovate? the use of crowdfunding and the impact of COVID-19, *International Journal of Sport Science and Coaching*,

El presente capítulo incluye una adaptación del artículo para la tesis.





## 1. Title:

How do International Olympic Sport Federations innovate? the use of crowdfunding and the impact of COVID-19

## 2. Abstract

The purpose of this study was to contribute to the understanding of innovation and crowdfunding of International Olympic Sport Federations (IFs), which are the world governing bodies of their respective sports. Three research questions were addressed: the perceptions of the IFs on the implementation of their innovation programs during the last four years (2016-2020), the impact of COVID-19 on the IFs capability to innovate, and the crowdfunding strategies of the IFs. A mixed method combining qualitative and quantitative approaches was used. An online semi-structured questionnaire which included an open answer section was completed by IFs executives ( $n = 22$ ) and an analysis of the information provided by IFs through various content sources was conducted. Results showed that IFs with less funding had a significantly more innovative approach than their counterparts, that the perception of the impact of COVID-19 on the innovative capability was not unanimous, that they identified sport-specific programs as the most innovative of all initiatives delivered during the pandemic, and that crowdfunding projects were implemented in their sport but mostly at individual and local levels. From a research perspective, since this is the first study that investigates the innovation and crowdfunding strategies of IFs, future directions include the need for further research with national and regional federations on these topics. Practical implications are suggested for IFs to deliver innovative programs to satisfy their stakeholder needs and to consider new funding methods such as crowdfunding as part of their strategies.

**3. Keywords:** innovation; change, sport; international federations; crowdfunding

## 4. Abbreviations

IFs – International Olympic Sport Federations – International Federations

IOC – International Olympic Committee

NFs – National Sport Federations

NSGOs – National Sport Governing Organizations

NPSOs – Non-Profit Sports Organizations

NSGBs – National Sport Governing Bodies

RFET – Royal Spanish Tennis Federation

## 5. Introduction

The objective of this study is to contribute to the understanding of innovation and crowdfunding in the specific context of International Olympic Sport Federations (IFs). Three research questions are addressed in this study: the perceptions of the IFs on the implementation of their innovation programs during

the last four years (2016-2020), the impact of COVID-19 on the IFs capability to innovate, and the crowdfunding strategies of the IFs. Four hypotheses were tested: (H1) IFs with more funding would be more innovative than those with lesser funds, (H2) the innovation capability of the IFs would be significantly affected by the COVID-19 pandemic, (H3) sport-specific programs would be often more implemented as innovations by IFs than non-sport ones, and (H4) that their use of crowdfunding would certainly be limited among the IFs.

Innovation in the sport domain has been defined by adapting some of the general definitions used in the literature. For this work, we use the one proposed by Tjørndal (2017, p. 293) as the *proactive and intentional processes that involve the generation and practical adoption of new and creative ideas, which aim to produce a qualitative change in a sport context*.<sup>1</sup> Several authors<sup>2-4</sup> have highlighted the importance of innovation in this field due to the inherent innovative nature of the sports industry, the risk-taking culture and proactive approach in adopting new ideas and processes that involve change. This relevance is increased by the transcendent and globalized nature of sport.

Crowdfunding in sport has been defined as “*a method of collecting small contributions through an online funding platform or site from a large number of funders*” (Ming and Huang, 2020, p. 85).<sup>5</sup> It is a new form of financing in this sector which is considered very relevant for the economic growth of the sports industry.<sup>6</sup> The links and relationships between innovation and crowdfunding are considerably strong since crowdfunding is considered as an innovative capital-raising technique that could be used to create more publicly owned organizations in the sports context.<sup>7</sup> The considerable changes operated in the sports eco-system, which have generated a gradual, constant, and progressive evolution from a local event to a world industry, make it an ideal environment for the application of a variety of crowdfunding strategies at certain levels of the business.<sup>8</sup>

International Olympic Sport Federations are the organizations that govern their respective sport globally and are recognized by the IOC. They have been defined as “*a group of National Sports Federations (NFs) and continental federations, at times completed by individuals, that wishes to promote and develop a specific sport or a group of sports disciplines on a world level*” (Chappelet and Kübler-Mabbott, 2008, p. 59).<sup>9</sup>

Research on innovation in regional or national federations has covered a diversity of domains such as resistance to technical innovation,<sup>10</sup> organizational intelligence,<sup>11</sup> attitude towards innovation,<sup>12</sup> innovation capability,<sup>13-15</sup> innovation champions,<sup>12</sup> and staff disposition.<sup>16</sup> Specific to crowdfunding in sport, it has received some attention from researchers which have investigated its overall role in sport,<sup>17</sup> its potential and limitations as a means of financing the public ownership of sports teams,<sup>7</sup> the potential substitution or co-existence of sponsorship and crowdfunding,<sup>18</sup> the success drivers or factors of a crowdfunding sports campaign,<sup>19,20</sup> or its determinants,<sup>21</sup> among other relevant topics.

Despite this interest in research settings and relevance in the sport context, to the best of our knowledge, no research has been conducted on the innovation programs of IFs (i.e., sport and non-sport) and on the impact of COVID-19 pandemic on their innovation capability or structure, and on the crowdfunding strategies of these organizations.

The COVID-19 pandemic has created an unprecedented situation worldwide. It has affected all aspects of human existence, sports included. As IOC President Thomas Bach stated: *“With the global COVID-19 pandemic, we are all living in much uncertainty. At this point in time, this uncertainty is far from subsiding [...]. This new situation will need all our solidarity, creativity, determination, and flexibility. We shall all need to make sacrifices and compromises. Extraordinary circumstances call for extraordinary measures. This situation requires every one of us to do our part, and this applies to all of us, including the IOC”* (Bach, 2020).<sup>22</sup>

Therefore, the research questions of our study are to understand the innovation programs implemented by international federations (i.e., grassroots, talent development, competitive structure, policies, education, communications, etc.), the influence of COVID-19 related to their innovation capabilities, and their use of crowdfunding by these organizations. We hypothesized that IFs would implement sport-specific programs more often than non-sport ones, that the IFs with more funding would be more innovative, that the innovation capability of the IFs would be significantly affected by the COVID-19 pandemic, and that their use of crowdfunding would certainly be limited among them.

The structure of the study is the following: The importance, areas, types and research conducted related to these topics as well as the research context, and IFs, are presented in the theoretical background section. The research design, data collection, sample, variables, and analysis are provided in the methods section. This is followed by the section which includes the results found and then the discussion regarding previous studies. Finally, the last sections include the conclusions of the research together with its practical applications, contributions, limitations, and suggestions for new studies.

## **6. Theoretical background**

Sport is a human activity that has many facets. One of them is its consideration as a business and a global industry that has many ramifications in other contexts of the community. Sport has transcended its initial boundaries and it has become an integral part of society as its traditions and practices are embedded in its functioning.<sup>23</sup> In the multi-cultural and changing sport eco-system, innovation can have a considerable impact and it can occur in a variety of contexts, both at an institutional and at an individual level, as it is not constrained by cultural, social, and political settings. It is used to gain a competitive advantage by providing better services to users.<sup>24-26</sup> In this context, the IFs' objective is to represent all those practicing the sport, notably those holding

licenses from the national federations, even if the individuals in question are instead members of their NF but at most members of their own local sports club.<sup>9</sup>

Research has identified the different areas that are affected by the dynamic innovation process in sport which include: (1) Sport management and leadership: Improvement of different levels of management of sport (i.e., policies, commercial and organizational issues, etc.),<sup>1</sup> (2) Emergence of new sports: Development of new sports, leisure activities or new competitions in existing sports, (3) Technology:<sup>27</sup> Creation and improvement of equipment, IT devices, platforms, etc., (4) Institutional change: Introduction of new rules and regulations in sport, (5) Entrepreneurship: Development, organization and management of new ideas related to sport, (6) Social issues: Contribution to grassroots and mass-participation programs for greater social justice and equality in sport, (7) Unethical innovation: Creation of new ways of gaining unfair competitive advantages in sport and (8) Market influenced change: Commercialization of professional sport and the sports industry. The main themes of research on sport innovation and strategy have been divided into six categories: Outcomes of strategic management and innovation, innovation processes, innovators and entrepreneurs, innovation types, innovation and strategy in sport organizations, and antecedents of innovation and strategic management.<sup>28,29</sup>

Of particular interest to our study are selected research findings on sport management and organizational innovation.<sup>4, 23, 24, 30-32</sup> The literature on this category highlights several key issues concerning this complex construct which are summarized as follows: (1) Categories or systems of organizational innovations: Administrative (affect the social system of an organization), and technical (the equipment or operational methods). Innovation requires change in both systems, (2) Phases of innovation: Difference between adoption (the decision to use it), and appropriation (its adaptation to a given organization). Innovation in sport is constantly evolving, (3) Processes of innovation: Process of diffusion of knowledge and information within the organization and the relevance of interorganizational networks to attain adaptive efficiency, (4) Key innovation agencies: Acknowledgment of the role of sports councils, NSGBs, or professional associations as focal points to generate and promote innovation and to determine the balance between sport tradition, athletic challenge, and overall interest, (5) Innovation capacity: Sports and key agencies do not develop at the same pace. Mass practice, fan interest, and results from top athletes influence this progress and affect their innovation capacity, (6) Innovation evolution: It happens along trajectories and is the product of single small collaborative and incremental inspiration efforts of groups of people (scientists, administrators, businesspeople, etc.), (7) Innovation pressure and competitiveness: The attempt of implementing innovations may come from a strong pressure for change from a variety of sources and in several different areas. Many innovations and entrepreneurial business ideas develop in the sports industry due to the emphasis on competitiveness, (8) Innovation analysis: The need for a holistic and dynamic analysis of innovation and change which considers the content (details), the context (internal and external culture, structure, and politics) and the process (actions, reactions, and interactions), (9)

Innovation uniqueness: Sports retain distinct management approaches and innovation processes and work differently in different sports.

There are several important features of innovation by NSGOs that can be concluded from the results of the research conducted.<sup>12, 16</sup> They are a specific type of NPSOs, the study of them can inform the mainstream literature on non-profit management (nature). These organizations are generally managed by a combination of board volunteers and employees (management). They face external control mechanisms (i.e., scrutiny of regulatory bodies) and internal mechanisms (such as social mission and accountability to members), which could potentially restrict their strategic choice and decision-making flexibility (control). They exist within a competitive environment and strive for resources to provide services to their members (environment). They do engage in change processes as they develop new services to satisfy and increase/maintain membership and financial support (innovation). These organizations offer new activities (such as leisure sports and sport programs) and services (i.e., online services, sport equipment rental) to meet the expectations of their stakeholders (which can include members, government, and sponsors) (activities).

Regarding crowdfunding in sport, researchers have investigated a series of topics such as its relevance,<sup>6, 18, 33</sup> models,<sup>7, 19</sup> context,<sup>6</sup> success drivers,<sup>19</sup> stakeholders and their roles,<sup>34</sup> and examples of best practice cases.<sup>5, 8, 33-35</sup>

Some research has viewed crowdfunding in sport as the new frontier for sport sponsorship by which corporations and individuals can assist athletes, teams or events and be part of their success. In this context research has concluded that sponsorship targeted long-term relationships in sport whereas crowdfunding had a more short-term approach since it was project-based.<sup>18</sup> Regarding its relevance, it has been indicated that it is a new type of active participation that translates into support for sports activities more than just the simple appreciation.<sup>6</sup> In this context, it has also been concluded that crowdfunding has great potential to become the significant source of sports self-financing.<sup>33</sup>

In terms of models, it has been suggested that crowdfunding is a concept which comprises various models for fundraising with a unique common characteristic, the fact that they publicly appeal usually for small amounts of money.<sup>7</sup> Three models were identified: (1) pure donations, (2) exchange for some type of reward or membership, and (3) investments in an ongoing business enterprise. Some authors have distinguished between for-profit or investment-based projects (i.e., equity-based, royalty-based and lending-based) and non-profit or reward and donation-based projects (i.e., with no monetary compensation).<sup>19</sup> A new model of crowdfunding based around the concept of shared sponsorship has also been proposed by Leroux-Sostenes and Bayle (2019) to be effective for the sports ecosystem.<sup>8</sup>

The context of crowdfunding in sport has already been investigated, with authors indicating that it has been used by individual amateur athletes, amateur and professional sports teams, leagues and tournaments, competitions, and events.

Indeed, crowdfunding is used as a vehicle to fund projects which are very heterogeneous.<sup>7,18</sup> However, it has been mentioned that the use of crowdfunding to promote a sporting activity or to finance the sporting season was not so usual.<sup>6</sup> The authors of a recent paper investigated crowdfunding as a financing instrument for sport during the COVID-19 pandemic and highlighted the cohesion between individuals and organizations as key factors for the success of the projects.<sup>36</sup>

Another topic which has attracted the research attention is that of success drivers in sport crowdfunding campaigns. One study concluded that donation-based sports campaigns were more likely to succeed than reward-based projects, that crowd-funding projects with fixed funding were more likely to be successful than projects with flexible funding, that over-funding was quite rare, and that campaigns with higher targets were less likely to achieve success.<sup>19</sup> Another research study concluded, in a sport crowdfunding project, that both the Facebook connection and the number of images per project increased its success of a project.<sup>21</sup> The ability to use the fans of a team as a source of external funds was found in other research as a key success factor for a crowdfunding sports campaign.<sup>37</sup> Other studies have also suggested that sport campaigns are more likely to be successful if they include a sponsor company.<sup>8</sup> Interestingly enough, another study found that one of the success determinants of sports projects financed with donation crowdfunding was the banner link to the website or blog of the YouTuber.<sup>20</sup>

The relationships between crowdfunding and entrepreneurship have also been studied and the authors identified the participating stakeholders that take part in a crowdfunding initiative and their roles being: (1) the project initiators, who seek funds for their projects, (2) the backers, who provide support to the project, and (3) the platforms, who are the intermediaries.<sup>34</sup> In a follow up study the authors also emphasized the relevance of internet-based platforms as the crucial means for a successful result of a crowdfunding campaign.<sup>33</sup> In this context, the identified emotional engagement with the club, altruism, desire to help family or friends, to belong to a community, and to collect rewards have been identified as the main backers' motivations in sports clubs reward-based crowdfunding campaigns.<sup>38</sup>

Best practice examples studied by researchers include those of national federations such as the Lacrosse Team USA to train, travel and compete in the World Cup and World Games,<sup>39</sup> some of the teams and athletes that took part in the Sochi 2014 Olympics,<sup>40</sup> clubs that financed an event<sup>41</sup> or a facility,<sup>42</sup> as well as multiple projects in sports such as volleyball, basketball, alpine skiing, canoeing or judo,<sup>37</sup> the co-finance of a sport facility name<sup>43,44</sup> or a club,<sup>45</sup> and its application to intercollegiate athletics.<sup>46</sup>

As per the research context, International Sport Federations are the focus of this paper. They are the central international entity for the sport in question and, as such, their key role as one of the main constituents of the world sports governance organizations have unanimously been recognized both by

researchers<sup>47,48</sup> and practitioners alike.<sup>49,50</sup> The globalization and professionalization of international sport together with the commercialization and the need for improvements in governance and management policies of these organizations have situated them at the center of media and research attention.<sup>51</sup>

However, despite the obvious relevance of the IFs role, the growing interest of non-scientific literature,<sup>50</sup> and the fact that many IFs have received considerable attention individually by researchers,<sup>52</sup> which has produced a gradual growing body of research on their activities during the last two decades, surprisingly there is a paucity of studies that compare the characteristics and programs of these organizations to progress the body of knowledge in this area and to inform policies and practical applications.<sup>53</sup>

Furthermore, despite aspects mentioned above to date no attempt has been made to study their innovation programs, use, if any, of crowdfunding strategies, and the impact of COVID-19 in their innovation strategies and capabilities. Therefore, the special characteristics of these organizations make them unique among the sport ecosystem and, we believed that they would be an appropriate subject of study to investigate the role of innovation programs in their context.

## **7. Methods**

Details on the research design, the data collection, the sample, the variables, and the analysis are provided in this section.

### *7.1. Research design and data collection*

A mixed research method design was used. An online semi-structured questionnaire that was sent to key management staff of IFs provided the quantitative data whereas the content analysis of information included in documents produced by the different IFs (i.e., reports, memorandums, meeting minutes, emails, and websites) provided the qualitative data. The involvement of the first author in international sport provided the access to these contacts and data. The period of 2016-2020 was the timeframe selected for the study since it was an Olympic quadrennial in which the IFs typically implement a diversity of innovation programs, as part of their activities.

This study used an adaptation of the innovation questionnaire developed by Winand et al. (2013) in their research with NSGOs.<sup>12</sup> This tool has two sections. The first one assesses three levels of innovation perceptions and attitudes (managerial, organizational, and environmental) with 29 items utilizing a 5 level Likert scale (Table 1). A full description of the original questionnaire is provided by the authors in other studies.<sup>12,54</sup> The questionnaire was adapted by including other items related to the COVID-19 pandemic and to concepts obtained from previous research which were thought to be relevant for the study.<sup>24,30,55</sup> The second section includes a series of open questions for participants to identify and describe innovative sport and non-sport activities, initiatives, services,

projects, products, or programs implemented by their IFs during the period of the study.



Table 1. Levels, categories, sub-categories, and items of the survey.

<b>Levels and categories</b>	<b>Sub-categories</b>	<b>Items (n=29)</b>
<b>Managerial level determinants</b>		
<b>Attitude towards traditional management</b>	Bureaucracy	41. The structure and responsibilities of my IF are unlike private firms
	Inflexible structure	42. A traditionally formal and hierarchic administrative model is preferable to a flexible and less structured model in my IF
	Against change	43. Change to the internal functioning of IFs can be counterproductive
		44. There can be accountability problems in IFs when services are privatized
<b>Attitude favoring change and newness</b>	Investment in new services	45. More financial investments (even risky) should be achieved by my IF to develop new services for members
		46. My IF should invest in the development of new services
	Risk taking	47. To achieve their goals, my IF should take risks
	Openness to change	48. Change is globally a good thing for my IF
	Openness to members' expectations	49. My IF should deliver new expectations of their members
	Openness to club's suggestions	50. Suggestions of national federations and clubs should be taken into account by my IF
	Openness to staff suggestions	51. Paid staff have ideas that my IF should take into account
	Professional management	52. My IF should be managed like business firms
53. It is important that my IF has clear mission and vision statements		

<b>Attitude towards contemporary management</b>	Involvement in decision making processes	54. The paid staff of my IF should be involved in the decision-making processes
<b>Organizational level determinants</b>		
<b>Perception of organizational culture</b>	Culture and relationships	55. The paid staff of my IF should have a corporate spirit
		56. My IF has an organizational culture and relationships between volunteers and paid staff that favors innovation
<b>Perception of innovativeness</b>	General	57. My IF is innovative
	Specific services	58. My IF provides innovative services, programs, products, and events
	Strategies and policies	59. My IF has coherent strategies and policies in place geared towards innovation
<b>Perception of ability to lead change</b>	Leadership within the organization	60. My IF has an organizational ability with their volunteers and staff to lead the change
	Leaders champions	21. There is a clear commitment from the IF volunteers to innovate our sport
<b>Perception of economic health</b>	Financial balance	22. My IF does not have difficulties to achieve financial balance
	Risky financial investments	23. My IF has sufficient financial resources to develop new services, even risky
	Attraction of financial resources	24. My IF does not have the necessary expertise to attract financial resources from private companies
	Economic health	25. My IF has good economic health
<b>Environmental level determinants</b>		
<b>Perception of pressures</b>	External pressures	26. There are external pressures to my IF to change and innovate
	Attraction of members	27. My IF competes with other sports federations to attract members

<b>Perception of competitive national environment</b>		28. The promotion campaigns of my IF are useful to attract future members
	Attraction of grants	29. IFs are competing among themselves to obtain grants 30. Competition to obtain grants is high
	Competition with commercial sports providers	31. Commercial sports providers are a threat to my IF's growth
<b>Perception of cooperative environment</b>	Cooperation with other organizations	32. My IF cooperates with other sport and non-sport organizations to innovate
<b>Perception of competitive regional environment</b>	Sport rivalry between regional sport federations	33. There is rivalry between the different national federations of my sport
<b>Perception of competitive international environment</b>	High-level sport competition	34. Competition between IFs to obtain international sport results is high
<b>Perception of COVID-19 impact</b>	Impact on the strategy and structure	35. COVID-19 has negatively affected the strategy and structure of my IF
	Impact on the capacity to innovate	36. COVID-19 has negatively affected the innovation capacity of my IF

The qualitative analysis was conducted following several steps. Initially there was a search, identification, and collection of the relevant information related to the innovative initiatives from the different IFs which could be found in the different content sources (i.e., internet, emails, memorandums, meeting minutes, brochures, reports, etc.). This was followed by the classification and analysis of the different contents according to the open questions included in the second section of the questionnaire (Table 2). The contents were selected according to their relevance in providing further details on the various initiatives and programs already mentioned in the open section of the questionnaire. The analysis was performed by the first author of this study with the assistance of the other two authors. This analysis allowed us to obtain further information on the characteristics, descriptions, and concepts of the programs.

Table 2. Break-down of sport and non-sport services that can be offered by an IF.

<b>Level and categories</b>	<b>Sub-category</b>	
<b>Sport services</b>		
<b>Player development</b>	Participation / grassroots	Programs for athletes of different categories (i.e., 10, 12, 14, 16 and 18 and under, adults and seniors).
	Performance / competition	Programs for athletes (i.e., sports policy, talent selection, training, camps, scholarships, etc.).
<b>Competitive structure</b>	Tournaments	Leagues, circuits, championships (i.e., organization, assistance, promotion, etc.).
<b>Policy</b>	Rules	Regulations, procedures for play (i.e., sport license, COVID-19, etc.).
<b>Education</b>	Activities	Education programs for coaches, referees, administrators, parents (i.e., courses, conferences, congresses, webinars, publications, etc.).
<b>Non-sport services</b>		
<b>General</b>	Management	General management and administration (i.e., procedures, registrations, sign-ins, etc.).
<b>Marketing</b>	Communication	Marketing and communication (i.e., campaigns, initiatives, etc.).
<b>Resources</b>	Equipment	Facilities and equipment (i.e., scholarships, grants, guidelines, etc.).
<b>IT</b>	Communications	ICT services (i.e., networks, platforms, etc.).
<b>Other services</b>	General	Other services (i.e., services provided but not included in the previous sections).
<b>Crowdfunding</b>	Specific strategies	Crowdfunding strategies implemented by the organization (i.e., events, projects, programs, etc.).

## 7.2. *Sample*

Following the procedure of Winand et al. (2013),<sup>12</sup> one key stakeholder of each IF received the questionnaire via email. These stakeholders were selected according to the unique criteria of their belonging to the executive professional staff of the IF. In line with previous studies on innovation in sport,<sup>56</sup> this research used a purposive sampling strategy since the individuals selected were considered experts that had a unique perspective on the innovation programs of their organizations and, as such, could provide extremely relevant views on these programs by identifying, classifying, explaining, and describing key themes, topics and features relevant to the study. All participants signed an informed written consent to take part in the research before data collection. The study was conducted following the declaration of Helsinki and had the approval from the Ethics Committee of the participating University.

As recommended by previous research,<sup>57</sup> their professional position and relationship within the IF together with their expertise in the field, made them aware of the innovation programs of these organizations. The personal contacts of the first author made communicating with this group of individuals possible, which was not easy to access to.

## 7.3. *Variables*

Table 1 shows the questionnaire's levels, categories, sub-categories, and items of innovation. The categories and sub-categories included at the managerial level are attitude towards traditional management (bureaucracy, inflexible structure, against change), attitude favoring change and newness (investment in new services, risk taking, openness to change, to members expectations, to club's suggestions and to staff suggestions), and attitude towards contemporary management (professional management and involvement in decision making processes). The categories and sub-categories included at the environmental level are perception of competitive regional environment (sport rivalry between regional sport federations), perception of competitive national environment (attraction of members, attraction of grants and competition with commercial sports providers), perception of competitive international environment (high-level sport competition), perception of COVID-19 impact (on the strategy and on the capacity to innovate), and perception of pressures (external), and perception of a cooperative environment (cooperation with other organizations). Finally, the categories and sub-categories included at the organizational level are perception of organizational culture (relationships), perception of innovativeness (general, specific services, strategies, and policies), and perception to lead change (leadership within the organization and leadership champions) and perception of economic health (financial balance, risky financial investments, and attraction of financial resources).

In the open section of the questionnaire the levels included are sport and non-sport, and the categories of services that can be offered by an IF. The categories

of sport services included were player development (participation/grassroots and performance/competition), competitive structure, policy, and education. As per the non-sport services they included general, marketing, resources, IT, other services, and crowdfunding strategies.

#### 7.4. Analyses

The statistical analyses undertaken are presented in this section. The RStudio v. 1.3.959 and the SPSS v. 26 were used to carry out the statistical analysis. A K-Means cluster analysis was conducted to classify the Federations depending on their budget and number of staff members. Clustering is a technique used to find and classify  $k$  groups of data (clusters). Thus, the elements that share similar characteristics will be together in the same group, separated from the other groups with which they do not share characteristics. The gap method was used to identify the optimal number of clusters. The abovementioned method suggested a 3-cluster model in which Federations were divided into large, medium, and small ones. Subsequently, the normal distribution of the variables was tested using the Kolmogorov-Smirnov test. Non-parametric tests were used since it was found that data did not distribute normally. Kruskal-Wallis and U Mann-Whitney pairwise comparisons with Bonferroni correction were used to test if there were differences among Federations. The significance level was established at 0.05. For all comparisons the size of the effect was calculated using eta-squared. Small effect values were considered  $0.01 < 0.06$ , moderate effect values were considered  $0.06 < 0.14$  and large effect values were considered  $\geq 0.14$ .

As per the analysis of the content from the open section of the questionnaire, data was initially classified between the two levels of sport and non-sport innovative programs. Then, key higher-order themes and terms were coded within each category of both levels and results of descriptions of programs, projects, or initiatives were matched with the of programs in place as labelled by the IFs. The innovative program most cited was considered the most preferred one in each category since, as indicated by Winand et al. (2013), the number of innovations was considered as relevant criteria. As per the crowdfunding, the views of the participants were also analysed similarly.

## 8. Results

This section presents the results as related to the hypotheses previously set. The sample of the study consisted of 22 participants representing the same number of IFs out of the total of 37 IFs which were sent the questionnaire. The response rate was of 60%. As it relates to their gender, 25% of the participants were female and 75% male with an average age of 43 ( $\pm 10.3$ ) years old.

The current operating annual budget of the IFs in US\$ indicated that, 42% had from 1,1 to 10 million US\$/year, 33% had from 10,1 to 50 million US\$/year and 25% had more than 50,1 million US\$/year.

For the analysis, it was considered that funding of the IFs was an appropriate criterion to differentiate between the sample. The results and the significant differences among the perceptions of the different groups in the questionnaire items are shown in Table 3 and relate to (H1) IFs with more funding would be more innovative than those with lesser funds, and (H2) the innovation capability of the IFs were found to be significantly affected by the COVID-19 pandemic.

As related to (H1) which hypothesized that IFs with more funding would be more innovative than those with lesser funds, the following was found. Two sub-categories (items 6 and 8) of the managerial and one of the organizational levels (item 21) determinants showed significant differences between executives of both groups. At the managerial level, the attitude favoring change and newness category, in the sub-category related to investment on new services, and item 6, smaller IFs felt that their organization should invest in the development of new services more than representatives of bigger IFs. At the same level and category, but in the sub-category of openness to change and item 8, smaller IFs also felt that change was globally a good thing for their organization more than their counterparts of bigger IFs felt. At the organizational level, the category of perception ability to lead change and the leaders' champions subcategory, and item 21, representatives of smaller IFs also felt that there was a clear commitment with sport volunteers to innovate their sport more than those representing bigger IFs. In general, results show that there are not too many differences between federations and that smaller federations have a greater tendency to change and innovate than bigger ones.

Based on the hypothesis (H2) that the innovation capability of the IFs would be significantly affected by the COVID-19 pandemic, results showed that the representatives of IFs in the sample had mixed perceptions on this aspect and did not show significant differences between IFs.



Item	Total Median (IQ)	Large Federations Median (IQ)	Medium Federations Median (IQ)	Small Federations Median (IQ)	H Kruskal- Wallis	p	$\eta^2$
1	4.00 (1.25)	3.00 (2.00)	4.00 (1.00)	4.00 (3.00)	0.170	0.919	0.096
2	3.00 (2.00)	3.00 (1.00)	3.00 (2.00)	3.00 (2.00)	0.051	0.975	0.103
3	2.00 (1.00)	3.00 (2.00)	2.00 (2.00)	2.00 (1.00)	0.334	0.846	0.088
4	3.00 (2.00)	3.00 (2.00)	3.00 (2.00)	3.00 (2.00)	0.098	0.952	0.100
5	4.00 (1.00)	3.00 (1.00)	4.00 (1.00)	4.00 (3.00)	0.672	0.715	0.070
6	4.00 (0.50)	3.00 (1.00) <sup>a</sup>	4.00 (2.00)	4.00 (1.00) <sup>a</sup>	5.670	0.059	0.193
7	4.00 (1.25)	3.00 (2.00)	3.00 (2.00)	4.00 (2.00)	2.004	0.367	0.000
8	4.00 (1.00)	4.00 (1.00) <sup>a</sup>	4.00 (0.00)	5.00 (1.00) <sup>a</sup>	6.525	0.038	0.238
9	4.00 (2.00)	4.00 (1.00)	4.00 (2.00)	4.00 (1.00)	1.753	0.416	0.013
10	4.00 (1.25)	4.00 (2.00)	4.00 (1.00)	4.00 (1.00)	4.699	0.095	0.142
11	4.00 (1.00)	4.00 (2.00)	4.00 (1.00)	4.50 (1.00)	4.676	0.097	0.141
12	4.00 (2.00)	4.00 (2.00)	4.00 (2.00)	3.50 (3.00)	0.330	0.848	0.088
13	5.00 (0.00)	5.00 (1.00)	5.00 (1.00)	5.00 (0.00)	4.133	0.127	0.112
14	4.00 (1.00)	5.00 (2.00)	4.00 (1.00)	4.00 (1.00)	2.110	0.348	0.006
15	4.50 (2.00)	5.00 (2.00)	5.00 (1.00)	4.00 (2.00)	1.152	0.562	0.045
16	3.00 (1.00)	3.00 (1.00)	3.00 (1.00)	4.00 (2.00)	2.834	0.242	0.044
17	4.00 (2.00)	4.00 (2.00)	4.00 (3.00)	4.00 (2.00)	0.420	0.810	0.083
18	4.00 (1.25)	4.00 (1.00)	4.00 (2.00)	4.00 (2.00)	1.947	0.378	0.003
19	4.00 (1.00)	4.00 (1.00)	4.00 (2.00)	4.00 (1.00)	1.528	0.466	0.025
20	4.00 (1.00)	4.00 (2.00)	3.00 (2.00)	4.00 (2.00)	2.741	0.254	0.039
21	3.50 (1.00)	3.00 (1.00)	3.00 (2.00) <sup>b</sup>	4.00 (1.00) <sup>b</sup>	0.099	0.011	0.100
22	3.00 (1.00)	3.00 (2.00)	3.00 (1.00)	4.00 (2.00)	1.352	0.509	0.034
23	3.00 (2.25)	4.00 (3.00)	3.00 (1.00)	3.00 (2.00)	1.927	0.381	0.004
24	2.00 (1.25)	2.00 (3.00)	2.00 (1.00)	2.50 (1.00)	0.225	0.894	0.093

<b>25</b>	4.00 (2.00)	4.00 (2.00)	4.00 (2.00)	3.50 (1.00)	1.173	0.556	0.044
<b>26</b>	3.00 (1.00)	3.00 (2.00)	3.00 (1.00)	4.00 (2.00)	1.741	0.419	0.014
<b>27</b>	2.50 (1.00)	2.00 (2.00)	2.00 (1.00)	3.00 (2.00)	0.303	0.859	0.089
<b>28</b>	3.00 (1.25)	3.00 (2.00)	3.00 (1.00)	3.00 (1.00)	2.144	0.342	0.008
<b>29</b>	3.00 (2.00)	3.00 (1.00)	3.00 (2.00)	3.00 (2.00)	0.731	0.694	0.067
<b>30</b>	3.00 (1.25)	3.00 (1.00)	3.00 (2.00)	3.50 (2.00)	2.104	0.349	0.005
<b>31</b>	2.50 (1.00)	3.00 (2.00)	3.00 (1.00)	2.00 (2.00)	0.760	0.684	0.065
<b>32</b>	4.00 (0.00)	4.00 (2.00)	4.00 (0.00)	4.00 (1.00)	0.197	0.906	0.095
<b>33</b>	3.00 (2.00)	3.00 (2.00)	3.00 (1.00)	3.00 (2.00)	1.332	0.514	0.035
<b>34</b>	3.00 (1.00)	3.00 (1.00)	3.00 (1.00)	4.00 (1.00)	1.835	0.399	0.009
<b>35</b>	3.00 (2.25)	2.00 (3.00)	3.00 (3.00)	3.00 (2.00)	1.457	0.483	0.029
<b>36</b>	2.50 (2.25)	2.00 (3.00)	4.00 (2.00)	2.00 (2.00)	3.463	0.177	0.077

Table 3. Results on the IFs representatives on the different levels, categories, sub-categories, and items according to the size of their IF.

As it relates to the initiatives, programs and projects delivered by the different IFs during the period of the study including their classification levels categories and sub-categories, the results are shown in Table 4. They relate to (H3) which hypothesized that sport-specific programs have a greater chance of being implemented as innovations by IFs than non-sport ones, and (H4) which hypothesized that the use of crowdfunding would be certainly limited among the IFs.

Table 4. Most cited programs or services in each category provided by the IFs in the period of study as identified by the managers in the questionnaire and further described in the interviews.

<b>Level categories</b>	<b>and Sub-category</b>	<b>Most cited program or service</b>	<b>Times cited</b>
<b>Sport services</b>			
<b>Athlete development</b>	Participation grassroots	/ Development program	22
	Performance competition	/ Talented tennis kids' programs	14
<b>Competitive structure</b>	Tournaments	Events for players of all age groups	13
<b>Policy</b>	Rules	COVID-19 regulations	16
<b>Education</b>	Activities	Online courses and conferences	20
<b>Non-sport services</b>			
<b>General</b>	Management	Stakeholder services	13
<b>ICT</b>	Communications	Strategy and initiatives	15
<b>Crowdfunding</b>	Strategies	Various considerations	3

Results showed that sport-specific programs were more frequently identified as innovation activities implemented by IFs during the pandemic than the non-sport ones. Some of the most relevant sport and non-sport initiatives as well as their views on crowdfunding are briefly presented below.

### *8.1. Participation / grassroots*

IFs identified development programs in which assistance was offered to their NAs in the form of equipment, material, or subsidies. Programs identified included: Shuttle Time Schools Program, AirBadminton, Get into Rugby, Aquatics Day, Tennis Festivals, Football for schools, Global Laser Run City Tour, Basketball for Goof, Learn2Curl, etc.

One of the development directors indicated: *“One of our key programs has been the collaboration with the sport manufacturers association (ATA) to produce didactic videos and items in Social media to explain the sport, help in its initiation and make it attractive to youth!”* [IF-1].

Another participant stressed that: *“The main goal of these programs is to focus on a simple principle: More than medals. They have to be accessible to all, and this can be done through annual beginner youth and adult training camps, as well as education programs for coaches and team members”* [IF-8].

## 8.2. Education

This category was also identified by the participants as one of the most relevant since the goal has been to provide coaches and judges certification programs mostly delivered with online seminars. The IFs agreed that they were moving from formal coaches' courses manuals on paper, to online Education modules followed by a few face-to-face sessions to practice and evaluate the knowledge. As indicated by one of the development directors of an IF: *“We have worked on the digitalization of our learning and certification processes, Publication of various manuals, organization of multiple sessions on-line and open to all public or targeted to some profiles, etc.”* [IF-11].

An interesting statement made by one of the IF managers was the following: *“Education is probably one of the areas, besides holding events, that was hit the hardest by the pandemic and due to financial reasons the implementation of the brand-new Educational Scheme was put on hold. Instead, we put in place a number of initiatives, Webinars, Online Lessons etc., that could be carried out by our staff (almost without any investment)”* [IF-17].

## 8.3. ICT / Communications

Communications, which included ICT services (i.e., networks, platforms, etc.) was the non-sport program mostly cited by IFs' representatives in the sample. This level generally consisted of full social media and communications strategies and policies which included traditional and digital-based programs.

As indicated by one respondent, some of the communication programs in their IF included the following: *“A new online Training and Education platform, a grants management platform, several Competition management platforms. New ERP Business delivery systems in finance, HR, Business analytics, innovation portal, document storage, internal communications, etc.”* [IF-20].

The principle of customer service was also mentioned by some of the participants as IFs were focused on offering: *“A comprehensive service covering registrations, as well as an event management, and an Athlete Identity and communication Hub which is currently under development”* [IF-7].

#### 8.4. Crowdfunding

Some representatives of the IFs that took part in the study acknowledged the existence of crowdfunding initiatives in their sport as part of the dynamic and fast-growing trend in the development of the sport eco-system towards a business-oriented activity. They also emphasized the need for using new methods and initiatives of financing sports projects and activities that would complement the traditional systems being used.

One of the IFs' managers commented: *"I am aware that some tournaments are using crowdfunding initiatives to access extra funds that will allow them to host the event. We know that, sometimes, clubs and tournament organizers find it difficult to cover the overall expenses of the event which, at the professional level, also include the prize money of the tournament. However, to my knowledge, this seems to be a practice that it is done at local level, at least in our sport. I am not aware of any national association or federation that has used this system"* [IF-16].

The use of crowdfunding by athletes and teams was also mentioned: *"Yes, even though we provide assistance and funds to national federations, we understand that support is limited by the resources available. This obviously affects the development capability of the nations. There may be some athletes, teams and clubs that look at new funding methods to cover the expenses of their training, travels, equipment, etc. This is still new to the sport but due to the changing environment, there is a growing potential for this to be used"* [IF-6].

A final note regarding the impact of COVID on the overall activity of the IFs, as one of the managers of an IF commented: *"Within our High-Performance Unit we run a number of dedicated athlete-focused programs, such as global Training Camps, Scholarship programs, etc. Unfortunately, they have been quite heavily affected during the pandemic therefore not much could be done lately"* [IF-13].

### 9. Discussion

This section will compare our results with those of previous studies. However, it is important to emphasize that, since this is the first time that innovation and crowdfunding strategies are investigated in the context of IFs, the discussion will be related to the research done with national sport federations.

In terms of innovation, our results are in line with those obtained by previous researchers who investigated coaches' perceptions of innovative programs implemented by the RFET and concluded that coaches identified a participation grassroots and a coach education program as the most relevant of all those implemented.<sup>58</sup> However, the views of the coaches that COVID-19 had negatively affected the innovation strategy and capability of the organization were stronger than those found in this study.

Our results are also similar to another research study that investigated the perceptions of stakeholders (i.e., managers, players, officials, etc.) on the innovation programs of the RFET, since the components of the sample also preferred tennis innovation programs over non-tennis ones.<sup>59</sup> They also concluded that the pandemic had affected the innovation capability of the RFET. Furthermore, regarding the innovation programs identified, our findings coincide with those of previous studies since sport-specific programs were the most relevant to be delivered by federations or associations.<sup>15,30,58,59</sup>

As it pertains to crowdfunding, our results are in line with those already found in the literature since representatives of IFs acknowledge the existence of initiatives in sport that use this new funding method at different levels, with a variety of actors and with a combination of success factors.<sup>5,8,34</sup> They also consider that crowdfunding has a considerable potential in the sport eco-system as already emphasized by previous studies in this context.<sup>6,8,33</sup>

Unfortunately, since there are no studies conducting on crowdfunding programs implemented by national, regional, or international federations, our results point out the need to further investigate why this initiative which is gradually being used by more organizations in the sports industry is still not present at the federation level. Some possible explanations for this lack of application may be related to aspects as varied as the strategy, vision, role, and financial structure of these organizations which may need to be addressed prior to considering the implementation of the complete crowdfunding strategy.

## **10. Limitations and future research directions**

Several limitations can be identified in this research. The first one relates to the size of the sample since even though the number of IFs that participated was a considerable one, the results would have been more representative with a higher response from the IFs. The second aspect has to do with the decision of asking just one representative per IF to take part in the study. If more staff members from each organization would have participated, the data collected could provide further details and insight. Finally, the questionnaire used, and the process that followed could have been adapted to include some questions individually tailored to each of the IFs. However, the fact that this is one of the few studies conducted with IFs in which many of these organizations have taken part is of merit.

As it relates to the future research directions, these may include studies with regional or continental federations (i.e., UEFA, Tennis Europe, etc.) which could provide an interesting comparison to the IFs since, many of them are smaller organizations due to their geographical involvement. Another interesting line of investigation could include the possibility of having other experts as representatives of IFs such as technical directors, coaches, referees, team support members, officials, etc. Furthermore, focus could also be on the study of the efficiency and development of sport-specific crowdfunding platforms, their implementation in emerging regions (i.e., Asia) and markets (i.e., amateurs,

adults), and the relationships between social media marketing and success factors of these campaigns.

## **11. Conclusions**

This research aimed to explore how IF representatives perceive innovation and crowdfunding in their context. The results of this study are the first to present the views of these sport organizations on these crucial topics. Even though there were not many significant differences between IFs, it has been shown that smaller organizations had a greater tendency to change and innovation than bigger ones. Related to crowdfunding, it can be concluded that IFs do not generally include this strategy among their programs which, in the sports context, it is more used at the individual, local and club level.

The results of this study present an overview of new innovation programs, the perceptions of the pandemic impact and the crowdfunding strategies of IFs representatives which have obvious practical applications and implications for all those involved at the managerial level in these organizations. We hope that this study has helped to gain a valuable insight on the innovation and crowdfunding strategies of organizations such as IFs which have a unique role in the global governance of sport.

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## **14. Disclosure statement**

The authors report there are no competing interests to declare.

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## **CAPÍTULO VII. DISCUSIÓN**



En este apartado se presenta una discusión general de los resultados obtenidos en las distintas investigaciones que forman parte de la tesis doctoral. Por tanto, no se repiten las discusiones presentadas en los capítulos anteriores, las cuales comparaban los resultados obtenidos en cada artículo con investigaciones ya realizadas por otros autores, sino que se lleva a cabo una discusión con los resultados obtenidos en los cuatro artículos que forman parte de esta tesis doctoral.

En cuanto a las percepciones de entrenadores, personal, gerentes y directivos de federaciones nacionales o internacionales sobre los programas de innovación de sus respectivas organizaciones, los resultados obtenidos permiten afirmar que en el ámbito directivo y de gestión se observa un apoyo unánime a una actitud que adopte estrategias de gestión modernas, en las que se favorezca el cambio, la profesionalización de la gestión y la formación, así como la orientación comercial de sus organizaciones.

Por tanto, los participantes coinciden en sus actitudes positivas hacia la innovación, la adopción de riesgos y la apuesta por tener en cuenta los puntos de vista y las expectativas de los diferentes grupos de interés, por que el personal forme parte del proceso de toma de decisiones y de cambio, por las conductas innovadoras en las relaciones entre las partes y por la novedad en la gestión de sus federaciones.

En el ámbito organizativo, también se observan coincidencias entre los resultados de los cuatro artículos en el hecho de que la percepción de la cultura organizativa y la capacidad para liderar el cambio se consideran fundamentales. En referencia al entorno, igualmente se observa una coincidencia en la percepción de las presiones competitivas en los entornos regional, nacional e internacional referidas a resultados, acceso a recursos y la necesidad de cooperación entre las distintas organizaciones

Por lo que se refiere a los servicios y programas innovadores identificados por los componentes de las distintas muestras representantes de las diferentes organizaciones coinciden en priorizar distintos servicios programas deportivos sobre aquellos generales como los más innovadores. Estos programas deportivos pueden tener varios objetivos como fomentar la participación (bien atrayendo, reteniendo o garantizando una actividad segura), el rendimiento (centrándose en los deportistas con talento), o el desarrollo y la mejora de los deportistas a largo plazo (a través de los valores del deporte). Igualmente destacan programas de formación de entrenadores que son implementados utilizando medios digitales. Todos ellos son programas que aplican las políticas de apoyo más importantes para el éxito de los deportes.

En cuanto a los servicios no relacionados directamente con el deporte, nuestros resultados coinciden en identificar los programas de digitalización y distintas innovaciones tecnológicas orientadas a la comunicación (p.ej. plataformas web y apps) como las soluciones más utilizadas para innovar por parte de estas organizaciones en su intento de proporcionar productos y servicios que

cumplan con las necesidades y expectativas de sus clientes, socios y aficionados. En este contexto, se ha enfatizado la relevancia de la transformación digital de dichas organizaciones para promocionar y desarrollar sus deportes en los contextos adecuados.

En referencia a las percepciones del impacto de la COVID-19 sobre la capacidad de innovación de las distintas organizaciones, se observa una coincidencia en la percepción negativa de la pandemia en la estructura y capacidad de estas. En concreto, se enfatiza el considerable impacto en la reducción de la capacidad económica y financiera de las organizaciones. Sin embargo, hay una diferencia notable entre las percepciones de algunos dirigentes de organizaciones de tenis frente a las de otros deportes pues los primeros observaron cierta capacidad de innovación durante la pandemia por el crecimiento de este deporte en dicho período debido a su capacidad para ofrecer una práctica segura basada en una información sobre mejores prácticas en el contexto incierto que se ha vivido.

Por lo que se refiere al crowdfunding, tema estudiado en el último artículo, se reconoce su potencial como instrumento de financiación, pero al mismo tiempo, se admite que su aplicación es, en este momento, limitada a casos muy individualizados.

A modo de resumen, podemos afirmar que tanto en el primer artículo, el cual estudiaba las percepciones de los entrenadores sobre los programas de innovación de la RFET, como en el segundo, en el que se consideraban las percepciones de las distintas partes interesadas sobre la misma organización, o en el tercero, que estudiaba las percepciones de gerentes de federaciones nacionales de tenis latinoamericanas o bien el cuarto y último que se centraba en gerentes de federaciones internacionales se observa una coincidencia en la percepción de la necesidad de adoptar estrategias de gestión innovadoras basadas en la profesionalización de los gestores.

Los resultados de nuestros estudios coinciden con una línea de pensamiento que considera que las organizaciones deportivas estudiadas no son diferentes a otras al sufrir el impacto de los mercados con los que interactúan, de ahí la necesidad de adoptar estrategias innovadoras en sus productos y servicios, muchas de ellas basadas en las tecnologías.

También se observa que las organizaciones tienen una idea clara de los productos y servicios que deben priorizar en sus estrategias innovadoras pues unánimemente se identifican aquellos relacionados con aspectos deportivos como los más relevantes.



## **CAPÍTULO VIII. CONCLUSIONES**



En este capítulo de conclusiones se incluyen las limitaciones de la investigación englobando las mencionadas en los diferentes estudios, así como sus implicaciones teórico-prácticas, las futuras líneas de investigación y unas consideraciones finales.

## **1. Limitaciones**

En líneas generales, a pesar de que las hipótesis formuladas en los distintos estudios, así como los diseños, metodologías de análisis y las muestras utilizadas tienen similitudes con investigaciones llevadas a cabo con anterioridad en este campo, es obvio que cabe reseñar ciertas limitaciones.

Las características de la muestra, en concreto el número, selección y tipología de los participantes en los distintos estudios pueden ser consideradas como limitaciones. Por ejemplo, en algunos casos, habría sido conveniente contar con un mayor número de representantes de las diferentes organizaciones (p.ej. un miembro del personal ejecutivo además del gerente o director general) o miembros con cargos diferentes al de gerente para presentar otro punto de vista desde la misma organización. En el caso de las Federaciones Internacionales, se logró una participación considerable, aunque no se obtuvo una respuesta de todas ellas. Sin embargo, ya se ha indicado que, el hecho de que éste sea uno de los pocos estudios realizados con estas organizaciones en los que han participado muchas de ellas tiene un mérito considerable.

La consideración de algunas de las variables utilizadas, por ejemplo, el género o la formación de los miembros de la muestra, podría considerarse igualmente una limitación de los estudios, aunque como se menciona en los mismos, no difieren del criterio seguido en investigaciones anteriores que se han tomado como referencia.

La operacionalización de las innovaciones en la sección abierta del cuestionario, en la que únicamente se consideró el tipo y no la magnitud de la innovación podría también considerarse un aspecto limitante de los estudios. Este aspecto está relacionado con el hecho de que podría haberse aumentado el espacio para responder puesto a disposición de los participantes en esta sección y, además, hubiera sido posible extender las descripciones de los distintos programas con el fin de que los participantes pudieran proporcionar más detalles específicos sobre los implementados por sus organizaciones.

En cuanto a la sección cuantitativa del cuestionario, aunque se adaptó al deporte del tenis cuando fue necesario por las características de la muestra, hubiera sido posible incluir algunas preguntas específicas individualizadas y adaptadas a las organizaciones participantes. Si no se hizo fue, obviamente, para evitar que el instrumento fuera excesivamente largo y afectara a la calidad de las respuestas de los participantes.

## **2. Implicaciones teórico-prácticas**

Las investigaciones que forman parte de esta tesis doctoral tienen, en nuestra opinión, unas implicaciones teóricas y prácticas obvias que se elaboran en este apartado.

Desde un punto de vista teórico nuestros estudios resumen y actualizan propuestas, modelos, marcos e investigaciones realizadas en innovación en el deporte y en las federaciones deportivas para analizar el estado actual del campo y la relevancia de su estudio. De esta forma se proporciona una visión específica sobre el estado actual de las estrategias de innovación en este tipo de organizaciones y sobre los programas implementados y las percepciones del impacto de la pandemia. Las aportaciones pueden ayudar a mejorar nuestra comprensión de los enfoques teóricos propuestos hasta la fecha lo cual permitirá a los investigadores afrontar nuevas líneas de investigación siguiendo una base teórica más sólida con relación a estas organizaciones deportivas.

Desde una perspectiva práctica, los resultados y las conclusiones de nuestros estudios permiten extraer varias implicaciones que pueden adoptar los gestores, administradores y voluntarios involucrados en estas organizaciones. Con el fin de proporcionar una reflexión más profunda, se procederá a mencionar dichas implicaciones prácticas según los distintos niveles de análisis.

En cuanto a los niveles de gestión y organización, se observa que los comportamientos tradicionales de gestión, organización y administración siguen presentes en el ecosistema del tenis y del deporte. Sin embargo, la adopción de estrategias profesionales que ayuden a mejorar la eficiencia de los programas es un aspecto claramente deseado. Las percepciones de los miembros de la muestra coinciden en considerar que la profesionalización en la gestión de estas organizaciones implica una gran ventaja a la hora de operar en un contexto cambiante, afectado por continuos desafíos y caracterizado por una complejidad dinámica. La gestión profesional y la participación en la toma de decisiones llevada a cabo por profesionales implicados en estas organizaciones parece ser la mejor o única opción para que estos negocios puedan proporcionar a sus clientes los servicios y productos que satisfagan sus necesidades y les permitan mantenerse o crecer según las circunstancias.

Por lo que hace referencia al nivel del entorno, el hecho de que se destaque la existencia de un contexto competitivo (local, regional, nacional e internacional) en el que tienen que luchar por practicantes, seguidores, financiación y subvenciones, entre otros muchos aspectos, sitúa también a las organizaciones deportivas en un ecosistema similar al de las empresas que operan en el mundo global de los negocios. Parece relevante que la adopción de estrategias que generen relaciones de cooperación con las empresas de su entorno puede servir para funcionar en este contexto de manera más eficiente. El conocimiento de la propia empresa, de los colaboradores y de los competidores se revela así fundamental para alcanzar este objetivo. También en el nivel del entorno, los componentes de la muestra han destacado el impacto negativo de la pandemia

del COVID-19 tanto en la estructura como en la capacidad innovadora y de gestión de sus organizaciones. Sin embargo, las organizaciones relacionadas con el tenis consideran que este deporte ha sabido adaptarse a los cambios exigidos por la pandemia consiguiendo un aumento sustancial en la participación.

En cuanto a los productos o servicios que constituyen las innovaciones concretas identificadas por los miembros de la muestra en nuestros estudios destaca el hecho de que se tratan de programas específicamente deportivos en lugar de aquellos generales. Por tanto, se observa que los expertos participantes tienen un conocimiento claro de las prioridades en innovación las cuales se centran en la provisión de servicios específicos del deporte en el ámbito de influencia de la organización con el objetivo de servir de herramientas de cambio, mejora y desarrollo de las empresas.

Desde una perspectiva global, otro aspecto práctico muy relevante es la necesidad que tienen estas organizaciones de comprender la singularidad de sus características y los aspectos únicos que las diferencian de las organizaciones con ánimo de lucro. De esta manera, si logran conocer mejor los detalles que las hacen únicas serán capaces de evolucionar y adaptarse a las nuevas tendencias de negocio en su ámbito.

Estimamos necesario, por tanto, que una cultura de la innovación impregne las estrategias de gestión de estas organizaciones para que se estimulen los cambios, impulse la asunción de riesgos y favorezca la adaptación al entorno. La educación de gestores, administradores y voluntarios que fomente la profesionalización en la gestión y la formación continua que incluya programas de intercambio de buenas prácticas y casos de éxito ante fenómenos imprevistos como la pandemia COVID-19 pueden proporcionar las herramientas necesarias para adoptar programas innovadores en el futuro.

Al mismo tiempo, este impulso educativo servirá para elevar el perfil y el reconocimiento de los gestores profesionales de estas entidades deportivas y les formará de manera más eficiente preparándolos para implementar y llevar a cabo las estrategias de innovación de estas organizaciones.

Finalmente, aunque nuestra línea de investigación se ha centrado en organizaciones deportivas sin ánimo de lucro, las posibles implicaciones de los resultados para el mundo empresarial en general son también evidentes. Especialmente, por lo que hace referencia a la adopción de programas dirigidos al aumento de la participación y la masificación de practicantes mediante enfoques innovadores adaptados a los tiempos difíciles como el creado por la pandemia del COVID-19. La capacidad de algunas de estas organizaciones deportivas para ofrecer a sus miembros alternativas válidas y seguras para seguir practicando sus deportes favoritos utilizando medios distintos a los habituales puede servir de inspiración a empresas de otros ámbitos inmersas en contextos dinámicos e inciertos como los descritos en nuestros estudios.

### **3. Futuras líneas de investigación**

Nuestro estudio aborda por primera vez el análisis de las percepciones de las partes implicadas sobre las estrategias y programas de innovación de federaciones deportivas nacionales e internacionales. Al tratarse de un enfoque novedoso en la investigación de los procesos de innovación en organizaciones sin fines de lucro los resultados aportados permiten obtener una visión inicial del ecosistema innovador en este ámbito.

Obviamente, es posible identificar distintas líneas de investigación que contribuirán a mejorar nuestro conocimiento sobre la innovación en estas organizaciones.

En primer lugar, por lo que hace referencia a las organizaciones objeto de estudio, nuestra investigación se centra en la innovación en federaciones nacionales e internacionales. Una línea muy interesante sería aplicar la misma metodología de estudio al análisis de la estrategia y los programas innovadores en organizaciones como clubes o federaciones locales o regionales. De esta manera, a la perspectiva macro, obtenida a través de nuestras investigaciones, se podría añadir la micro, constituida por clubes o federaciones de ámbito geográfico más reducido, con lo que sería posible conocer y comparar las percepciones obtenidas en ambos contextos.

En cuanto a los sujetos de la investigación, en nuestros trabajos hemos conseguido analizar las percepciones de aquellos que consideramos partes implicadas en la gestión de dichas organizaciones (p.ej., gerentes, administradores, voluntarios, directivos, entrenadores, árbitros y jugadores). Sin embargo, hay un colectivo muy relevante que no ha sido estudiado, es el de los aficionados al deporte. El estudio de las percepciones de este grupo sobre la innovación de las federaciones podría aportar una perspectiva diferente y más amplia sobre este fenómeno, la cual probablemente añadiría información relevante al contexto global. Además, otros colectivos que podrían también incluirse son los de los medios de comunicación o los padres de los deportistas debido a su especial rol en el ámbito del deporte.

Por lo que hace referencia al diseño de la investigación, podría optarse por priorizar la utilización de la metodología cualitativa a la hora de analizar las percepciones de los miembros de la muestra. De esta forma, se conseguiría profundizar en algunos temas que han quedado simplemente mencionados o identificados en los cuestionarios pero que sería necesario e interesante abordar con una atención especial.

En cuanto a lo posible análisis que podrían realizarse, futuros estudios pueden comparar las innovaciones entre organizaciones en función de sus dimensiones, ámbitos u otras variables relevantes. Ya se ha mencionado la posibilidad de centrarse en la magnitud o radicalidad de las distintas innovaciones y sus impactos en las organizaciones que facilitara la agrupación de estas.

Desde una perspectiva general, futuros enfoques de recursos humanos, etnográficos y sociológicos podrían aportar conocimientos interesantes sobre los procesos de innovación de estas organizaciones. En concreto, si se ampliaran las investigaciones a un mayor número de entidades de distintas regiones y continentes, sería posible comparar las estrategias innovadoras en todo el mundo y reflexionar sobre las influencias y diferencias culturales, sociales o geográficas.

Además, el análisis específico e individualizado de las características más relevantes de los programas identificados como más innovadores, en general todos aquellos relacionados con las disciplinas deportivas, aportaría principios que podrían aplicarse como buenas prácticas por las diferentes organizaciones.

En el contexto del COVID-19, futuros estudios deben continuar analizando el impacto de la pandemia en las estrategias de innovación de estas organizaciones deportivas y, en concreto, las herramientas y alternativas que estas generan o a las que acceden para enfrentarse a esta u otras posibles catástrofes inesperadas.

Finalmente, en cuanto al crowdfunding, debido que su estudio en organizaciones federativas se encuentra en sus primeros pasos, todo avance es bienvenido. En concreto, estudios sobre las plataformas específicas para el deporte, su uso en mercados deportivos emergentes y sus relaciones con estrategias de marketing digital, comunicación o servicio a los consumidores, proporcionarían información muy valiosa tanto a la comunidad científica como a los gestores deportivos.

#### **4. Consideraciones finales**

La línea de investigación que se presenta en esta tesis doctoral constituye una primera aproximación al estudio de la innovación y del crowdfunding en federaciones deportivas nacionales e internacionales. La importancia de la innovación en el deporte y la relevancia que estas organizaciones tienen en el ecosistema deportivo justifican sobradamente la necesidad de nuestro trabajo. Los resultados de nuestros estudios son los primeros en presentar las percepciones de estas organizaciones deportivas sobre estos temas cruciales.

Nuestros resultados proporcionan una interesante y novedosa visión sobre el entorno de innovación presente en estas organizaciones el cual se caracteriza primeramente por un deseo por parte de los gestores orientado hacia una mayor profesionalización en la administración. La necesidad de una gestión moderna, orientada al cliente, basada en los servicios y fundamentada en la innovación es considerada fundamental para que estas organizaciones sean capaces de satisfacer las necesidades de sus usuarios y clientes de manera eficiente.

Por otro lado, los resultados obtenidos permiten concluir que los programas identificados como más innovadores de los llevados a cabo por estas

organizaciones son aquellos dirigidos a proporcionar productos y servicios deportivos en contraposición a los dirigidos a los servicios más generales. En este sentido, cabe destacar la preferencia por los programas relacionados tanto con el desarrollo de los deportistas (orientados a la participación y al rendimiento), como con la formación de los entrenadores.

Igualmente, los estudios permiten concluir que el impacto de la pandemia del COVID-19 sobre la estructura y la capacidad de innovación de estas organizaciones ha sido considerable. Si bien, algunas federaciones, como las de tenis, afirman que las especiales características de este deporte (p.ej. al favorecer la distancia social de seguridad) han permitido crecer en número de practicantes durante este período.

Asimismo, las conclusiones de los distintos trabajos coinciden en presentar a estas organizaciones como proveedores de programas, productos y servicios de innovación en sus ámbitos de actuación. Así, sería recomendable que directivos y voluntarios tuvieran en consideración estos resultados para empoderar a gestores y administradores con el fin de mejorar las estrategias de gestión de estas organizaciones.

En este contexto, nuestros trabajos facilitan una mejor comprensión del impulso del cambio, de la necesidad de tener en cuenta los puntos de vista de los gestores en el proceso y de la importancia de adoptar un enfoque arriesgado, moderno y profesional que favorezca la innovación en estas organizaciones. Curiosamente, en el ámbito de las federaciones internacionales, nuestros resultados concluyen que las organizaciones más pequeñas tenían una mayor tendencia al cambio y a la innovación que las más grandes, aspecto que sería muy interesante seguir investigando en el futuro.

Por tanto, estimamos relevante que estas organizaciones adopten las estrategias necesarias para seguir mejorando en la generación e implementación de servicios innovadores para satisfacer las necesidades de sus grupos de interés. Así, consideramos que las federaciones deportivas deben progresar desde el impulso de las innovaciones tecnológicas y de producto, que son las más habituales en el deporte, a las innovaciones en servicios y programas específicos para proporcionar la adecuada experiencia a sus clientes según sus necesidades.

En cuanto al crowdfunding, nuestro trabajo es un primer paso para comprender mejor el rol de esta estrategia en el contexto investigado. Nuestros resultados permiten concluir que es necesario profundizar en la necesidad de una mayor implementación de esta estrategia innovadora en las organizaciones estudiadas. Esto es así porque las percepciones de las principales partes interesadas han permitido comprender mejor los niveles de gestión, entorno y organización de este fenómeno, los cuales se encuentran en una etapa inicial de desarrollo debido a su utilización en ámbitos individuales, locales y en clubes deportivos.



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