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Revisores

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DESIGN THINKING APLICADO A LA RESOLUCIÓN DE CONFLICTOS EN UN NEGOCIO FAMILIAR

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Resumen

Objetivo: determinar la eficacia del *design thinking* (DT) como metodología para la negociación y resolución de conflictos en empresas familiares, aplicándolo a un caso específico y comparando los resultados con aquellos obtenidos mediante enfoques tradicionales sin una metodología estructurada. **Metodología:** desde un enfoque cualitativo, el estudio se llevó a cabo con dos grupos de estudiantes de posgrado de la Universidad de Lima (Perú). En una primera etapa, ambos grupos abordaron simultáneamente un caso de conflicto organizacional, sin emplear una metodología estructurada ni una guía de análisis. Posteriormente, recibieron una inducción en la metodología de DT, en la que se delimitaron los objetivos de la resolución del conflicto, y se les solicitó resolver nuevamente el mismo caso aplicando dicha metodología, con el propósito de alcanzar acuerdos negociados. **Resultados:** los resultados obtenidos fueron significativos en el contexto de las empresas familiares. Se evidenció que la aplicación del DT facilitó un proceso de negociación más estructurado, colaborativo y orientado a la consecución de acuerdos efectivos, en contraste con el abordaje inicial sin metodología. **Conclusión:** se confirmó que el DT es una herramienta válida y eficaz para abordar conflictos en contextos de empresa familiar. Los grupos que participaron en condiciones simultáneas y con el mismo caso concluyeron que el DT facilitó un análisis estructurado del conflicto y promovió soluciones colaborativas más efectivas que las derivadas de los enfoques tradicionales. **Originalidad/valor:** este estudio aporta evidencia sobre el uso del DT como una metodología útil para la preparación de negociaciones en entornos familiares y empresariales. Asimismo, abre una línea de investigación prometedora en el ámbito académico orientada a la formación de capacidades para la resolución estructurada de conflictos mediante herramientas innovadoras.

Palabras clave: *design thinking*, empresas familiares, negociación, innovación, diseño colaborativo, resolución de conflictos
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DESIGN THINKING APPLIED TO CONFLICT RESOLUTION IN A FAMILY BUSINESS

Abstract

Purpose: This study explores how design thinking (DT) can serve as an effective methodology for negotiation and conflict resolution in family businesses. It applies DT to a specific case and compares the outcomes with those achieved through traditional, unstructured approaches. **Methodology:** The research followed a qualitative design with two groups of graduate students at the University of Lima (Peru). In the first stage, both groups analyzed the same organizational conflict without any structured framework or analytical guide. In the second stage, the students received training in DT, defined the goals of conflict resolution, and then revisited the case using DT to reach negotiated agreements. **Findings:** DT led to more structured and collaborative negotiations that produced more effective agreements than the initial unstructured approach. In the context of family businesses, the methodology encouraged participants to frame the conflict clearly, generate creative alternatives, and move toward consensus. **Conclusion:** The study shows that DT works as a practical and reliable tool for resolving conflicts in family business settings. Participants agreed that DT helped them approach the conflict with greater clarity and achieve solutions that traditional methods rarely deliver. **Originality/value:** The research provides empirical evidence on the usefulness of DT in preparing negotiations within family and business environments. It also points to a promising academic pathway for building conflict-resolution skills through innovative and structured methodologies.

Keywords: design thinking, family businesses, negotiation, innovation, collaborative design, conflict resolution

1. INTRODUCCIÓN

El *design thinking* (DT), traducido como 'pensamiento de diseño', se consolida en empresas a inicios de los 2000; en el 2006, adquiere impulso institucional con la d.school de Stanford y con la HPI D-School de Potsdam; y, desde el 2009, se difunde ampliamente el proceso popularizado por la Stanford d.school. Desde esta perspectiva, el DT se entiende como un conjunto integrado de principios y prácticas —centrado en el usuario, reencuadre del problema, visualización, prototipado/experimentación y trabajo interdisciplinario— orientado a resolver problemas humanos y a generar innovación (Carlgren et al., 2016).

Posteriormente, su uso se extendió a la investigación, a la innovación empresarial y a los entornos académicos (Carlgren et al., 2014, 2016). Además, ha sido aplicado en procesos de innovación por empresas como IBM, Google, Pepsico y Bank of America, con el fin de crear nuevos productos y servicios orientados a satisfacer las necesidades del cliente, deleitar a los usuarios y aumentar las ventas (Gruber et al., 2015). Diversos estudios han reportado que los gerentes se han mostrado satisfechos con los esfuerzos de innovación de sus organizaciones, sentimiento que refleja el éxito de los productos y servicios introducidos (Castellion & Markham, 2013). Este contexto propició la búsqueda de nuevas formas de inventar y desarrollar productos, lo que motivó la participación de instituciones como la d.school de Stanford y consultoras como IDEO (empresa de diseño global), las cuales respondieron —mediante libros, cursos y proyectos en torno al DT— con alternativas a los métodos tradicionales de innovación (Brown, 2008; Kelley & Kelley, 2013).

Del mismo modo, Carella et al. (2023) consideraron que el DT constituye un método creativo de resolución de problemas que fomenta la innovación a través de la generación de ideas, el acceso a información sobre los usuarios finales, la prueba de soluciones y su implementación. Recientemente, esta metodología también ha sido útil para abordar conflictos y procesos de negociación (Pedersen, 2020), así como para promover enfoques interactivos orientados al cambio organizacional (Eddington et al., 2020).

En las empresas familiares, la lógica empresarial puede chocar con las relaciones familiares y generar situaciones conflictivas; por ello, son un escenario propicio para poner a prueba el DT como metodología de resolución de conflictos. En tal sentido, en esta investigación se busca comparar la efectividad del DT con la de un enfoque tradicional, es decir, sin el uso de una metodología formal.

Huang y Hands (2022) ofrecieron una visión amplia del DT y propusieron que este evolucionó desde su posición preliminar como herramienta para la resolución de problemas hacia una filosofía organizacional orientada a la innovación. A medida que el DT alcanzó una etapa de amplia adopción empresarial, surgieron cuatro preguntas de investigación críticas: ¿qué es el pensamiento de diseño?, ¿cómo funciona?, ¿conduce al éxito de la innovación? y, en caso afirmativo, ¿bajo qué circunstancias? Sin respuestas claras a estas preguntas, las organizaciones podrían sentirse atraídas por el DT como una solución universal, pero no lograrían los resultados esperados debido a una implementación inadecuada.

Aunque las investigaciones sobre el pensamiento de diseño han aumentado de forma acelerada, en su mayoría han sido de carácter anecdótico o prescriptivo. Hasta la fecha de este estudio, existía un número limitado de conocimiento riguroso basado en investigación empírica (Cousins, 2018; Liedtka, 2015). En efecto, una de las principales limitaciones de esta literatura emergente fue la escasez de estudios confirmatorios en contextos empresariales (Carlgren et al., 2014; Micheli et al., 2019). Sin embargo, la investigación formal destacó las diversas aplicaciones del pensamiento de diseño (Beverland et al., 2015; Cooperrider, 2010), sus principios fundamentales (Micheli et al., 2019) y los vínculos entre el DT y las capacidades organizativas (Elsbach & Stigliani, 2018; Zheng, 2018).

Asimismo, se han identificado estructuras y recursos que habilitan el DT, como los acuerdos de alianza (Bouncken et al., 2018), los sistemas internos de recompensa (Behrens & Patzelt, 2018) y la participación activa de clientes (Morgan et al., 2018). En cuanto a técnicas, la literatura describe: investigación y descubrimiento (entrevistas en profundidad, observación etnográfica), síntesis y encuadre (personas, mapas de empatía, *customer journey maps*, *service blueprints*), ideación (lluvia de ideas estructurada, SCAMPER, análisis morfológico) y experimentación a partir de prototipos de baja y alta fidelidad, pruebas A/B, *wizard of Oz* o ciclos rápidos de prueba-aprendizaje (Frow et al., 2015; Thomke, 1998). Si bien estos estudios resultan esclarecedores, la mayoría son de carácter conceptual y exploratorio, por lo que las cuatro preguntas planteadas previamente no se abordan de forma completa (Bagno et al., 2017; Carlgren et al., 2014).

El proceso de negociación se estructura en tres fases principales: preparación, encuentro e implementación. Estas etapas conforman un modelo de tres por tres: fase preliminar, que incluye la introducción y la retroalimentación; fase estratégica, que abarca los argumentos, el regateo y el cumplimiento; y fase táctica, centrada en el cierre (Kelly & Chicksand, 2024; Parvaneh & Akbari, 2022). Por su parte, la metodología de negociación de Harvard se sustenta en tres pilares: separar a las personas del problema, enfocarse en los intereses y no en las posiciones, y generar opciones de beneficio mutuo. No obstante, en escenarios marcados por diferencias culturales, es necesario adoptar un rol más activo al negociar. En este contexto, destacan las 5P de la negociación intercultural (*cross-cultural*): pasaporte, pasado, profesión, protocolo y poder. Considerando estos elementos, se plantea que es posible ir más allá mediante la aplicación de metodologías ágiles como el DT, las cuales permiten alcanzar acuerdos sostenibles, eficaces y eficientes.

Un caso en el que se aplique el enfoque DT debe cumplir con los siguientes criterios: la definición de las partes involucradas o *stakeholders* y la adopción de sus respectivos roles; la ideación, que inicia con un trabajo individual, seguido de un trabajo en equipo y la discusión de propuestas; la simulación de un prototipado mediante entrevistas con especialistas y testigos del ejercicio de ideación; y una dramatización tipo *role play* como parte de un proceso iterativo hasta alcanzar el objetivo planteado.

En las empresas familiares, en particular, o en las corporativas, en general, las metodologías estructuradas de negociación —como el análisis previo del conflicto, la evaluación de posibles escenarios o la preparación anticipada, así como otras estrategias sugeridas por modelos como el de Harvard— no se implementan de forma poco sistemática y rigurosa, sino que predomina un enfoque tradicional carente de método, lo cual no garantiza resultados consistentes.

Jehn (1995) ha analizado de manera cualitativa los tipos y dimensiones del conflicto en las organizaciones En investigaciones anteriores (Jehn, 1992), ya había resaltado los beneficios y desventajas del conflicto intragrupal. Al respecto, consideró que el conflicto de ideas puede resultar constructivo cuando el diálogo contribuye a la generación de nuevas soluciones. Por el contrario, el conflicto en las relaciones tiende a deteriorar los vínculos interpersonales, lo que genera situaciones en las que una parte gana y otra pierde.

Ensley y Pearson (2005) realizaron un estudio exploratorio sobre la dinámica conductual de los equipos de alta dirección en nuevas empresas (familiares y no familiares), en el que examinaron cohesión, conflicto, potencia y consenso. Aunque no reportaron efectos estadísticamente concluyentes, su aporte reside en la delimitación y operacionalización de estas variables, lo que motivó la revisión teórica de Nordqvist (2005). A partir de ese replanteamiento, Chang Ching (2014) desarrolló un modelo de ecuaciones estructurales que integró las cuatro variables y corroboró sus vínculos, con lo que se halló —en equipos de alta dirección del sector textil-confecciones en el Perú— una relación negativa entre consenso y conflicto.

En la práctica empresarial, el conflicto en las empresas familiares es un tema central que, en muchos casos, permanece sin resolverse. Esta investigación da un paso adicional al proponer el DT como herramienta para la gestión de conflictos. La base metodológica sigue a Brown y Wyatt (2015) con énfasis en ideación y otras fases del DT para priorizar el conflicto de ideas (cognitivo) frente al conflicto relacional (interpersonal), de acuerdo con la distinción planteada por Jehn (1995) para equipos de trabajo en general. En este estudio, dicha distinción se aplica al contexto de empresas familiares como marco conceptual para orientar intervenciones de DT.

Así, el DT se plantea como una metodología que complementa el modelo de negociación de Harvard, al aportar técnicas de reencuadre, ideación y prototipado de acuerdos. La literatura reciente —y la corriente principal de los aportes sobre negociación organizacional y empresa familiar— sugiere su aplicación para la resolución de conflictos en empresas familiares, especialmente cuando estos derivan de problemas de gestión que impactan a la familia, pero no se abordan desde la dimensión patrimonial (por ejemplo: sucesión, profesionalización del *management*, política de dividendos frente a reinversión, asignación de funciones entre hermanos).

En este estudio, el DT se aplicó a un conflicto ficticio verosímil mediante un enfoque contrafactual: dos grupos con igual número de participantes realizan las mismas tareas en paralelo y reciben la misma información en tiempo real, y se diferencian solo por la metodología que utilizan (tratamiento: DT; control: negociación tradicional). Este diseño permitió controlar variables externas —por ejemplo, el tamaño del grupo, la composición por roles o experiencia, el tiempo disponible, los materiales e instrucciones, la secuencia de actividades, la facilitación y condiciones del espacio—. Además, se privilegió el conflicto cognitivo y de tareas sobre el conflicto relacional e interpersonal, siguiendo la distinción clásica de Jehn (1995); y se reconoció, desde la perspectiva de la empresa familiar, que el *relational conflict* suele ser perjudicial mientras que el *task/process conflict* puede resultar funcional bajo ciertas condiciones (Kellermanns & Eddleston, 2004).

Cabe destacar que la sucesión constituye uno de los principales temas de análisis en la investigación sobre empresas familiares (Davis & Harveston, 1998; Handler, 1990, 1992, 1994; Lansberg, 1999; Shepherd & Zacharakis, 2000). Aunque se han documentado diversos tipos de conflicto, los más frecuentes están relacionados con diferencias generacionales (Kellermanns & Eddleston, 2004, 2006; Morris et al., 1997).

Asimismo, se observa que el conflicto en la empresa familiar es un tema de preocupación de larga data (Harvey & Evans, 1994; Hermann et al., 2011; Levinson, 1971; Shepherd & Zacharakis, 2000; Swagger, 1991). Caputo et al. (2018) consideraron que los conflictos en este tipo de organizaciones surgen principalmente a partir de cuatro factores: los *stakeholders* y accionistas, la dinámica empresarial, la negociación laboral y la negociación dentro de la familia. Los conflictos organizacionales suelen clasificarse en tres categorías: de tareas, de procesos y de relaciones (Jehn, 1992, 1995). En términos generales, los estudios se han centrado especialmente en los conflictos de tipo relacional, dado que estos tienden a disminuir tanto el desempeño como la satisfacción de las personas involucradas (De Dreu & Van Vianen, 2001; Mazzola et al., 2008; Simons & Peterson, 2000).

En este sentido, se reconoce que el proceso de sucesión está estrechamente vinculado con los conflictos relacionales que incluyen disputas y tensiones interpersonales (Handler, 1990, 1992, 1994; Lansberg, 1999). Morris et al. (1997) introdujeron el conflicto relacional como un aspecto crítico en las empresas familiares. Davis y Harveston (2001) incorporaron el elemento multigeneracional en la discusión sobre los conflictos y señalaron su impacto negativo en la propiedad, el poder y la continuidad del liderazgo. En efecto, esto influye directamente en las decisiones sobre la distribución de los recursos financieros y en la visión estratégica de la empresa familiar.

La participación multigeneracional aumenta la probabilidad de conflicto de tareas y procesos, y su impacto (funcional frente a disfuncional) depende del nivel de conflicto relacional: si el conflicto relacional es bajo, el conflicto de tareas puede ser útil; si es alto, entonces tiende a ser dañino (Kellermanns & Eddleston, 2006; König et al., 2013).

Verbeke y Kano (2012) consideraron que, desde la perspectiva de la teoría de la agencia, los conflictos pueden surgir cuando el CEO familiar actúa en función de sus propios intereses y beneficios. Esta situación genera conflictos relacionales con otros miembros de la familia, tanto dentro de las operaciones de la empresa como fuera de ellas, lo cual puede traducirse en dificultades para reemplazar a miembros de la familia, en la resistencia a procesos de profesionalización y en la imposición de barreras a gestores externos. Frente a ello, Pieper et al. (2013) sostienen que, cuando un problema empresarial sugiere la necesidad de separar a la familia del negocio, la solución debe abordarse desde la esfera familiar. Finalmente, Alderfer y Smith (1982) sugirieron que un diagnóstico profundo de la empresa constituye una herramienta útil para comprender la dinámica familiar.

El conflicto constituye una característica estructural de las empresas familiares y está presente en los tres sistemas que las integran: el negocio, la familia y la propiedad. Desde la publicación del trabajo de Lansberg (1989), se ha reconocido que estos conflictos son inevitables, dada la coexistencia de actores con roles, intereses y objetivos frecuentemente divergentes. No obstante, la investigación en este ámbito ha priorizado el estudio descriptivo y clasificatorio de los conflictos (el qué), mientras que los enfoques metodológicos dirigidos a su gestión práctica (el cómo) han sido abordados de manera marginal.

Esto se evidencia en una brecha crítica en la literatura académica: existe escasa atención al desarrollo y a la validación de herramientas concretas que permitan gestionar de forma efectiva y colaborativa los conflictos en contextos de empresas familiares (Bürgel & Hiebl, 2024). Frente a ello, la presente investigación propone al DT como un enfoque metodológico pertinente e innovador, orientado en las personas, en su capacidad para fomentar la empatía y en su estructura iterativa, basada en la creación colaborativa, ofrece un marco idóneo para abordar los conflictos de forma participativa y transformadora en las empresas familiares.

2. METODOLOGÍA

Para abordar la brecha identificada, el presente estudio tuvo como objetivo determinar la composición, las consecuencias y las condiciones contingentes del DT en empresas familiares mediante la validación empírica de un marco de investigación. Para ello, se propuso y confirmó una simulación de negociación utilizando DT con el propósito de ofrecer una representación más coherente y menos superficial de su ontología, dinámica y efectos. Específicamente, se planteó la existencia de componentes interrelacionados del DT y su impacto en la negociación dentro del contexto de la empresa familiar. Entre las principales contribuciones del estudio, se destacaron las siguientes: una nueva conceptualización del DT como una construcción dinámica y multidimensional, la confirmación de su influencia positiva en el desempeño organizacional y la identificación de sus efectos beneficiosos tanto en el ámbito empresarial como familiar. En conjunto, estos aportes permiten construir una visión más holística del DT aplicado a la negociación, en comparación con estudios previos.

El caso simulado se diseñó sobre la base de una situación representativa de las empresas familiares peruanas, en las cuales el control del negocio comúnmente recae en un miembro de la familia que asume la gerencia general. En tal contexto, los demás miembros familiares suelen recibir información limitada, lo que les impide comprender plenamente la realidad de la gestión de la empresa. Este déficit de información se convierte en el núcleo del conflicto, pues el propietario queda expuesto a presiones cruzadas por parte de distintos familiares, lo que genera divisiones tanto en la esfera familiar como en la gestión del negocio. Naturalmente, lo más crítico de este escenario es que, con el paso del tiempo, la relación familiar se deteriora. Así, cuando la situación económica es desfavorable y los resultados empresariales no respaldan la gestión, el conflicto se intensifica. En ese sentido, el caso presentado busca reflejar una realidad sensible y compleja, caracterizada por tensiones crecientes en el seno de las empresas familiares.

La presente investigación es de enfoque cualitativo y está basada en el desarrollo de un caso de negocios que refleja una situación comparable a la que se busca analizar. Se trata de un caso ficticio en el que intervienen diversos actores, cada uno con un rol definido. Este estudio de caso, inscrito en el paradigma cualitativo, plantea una indagación profunda y detallada acerca del modo en que se actúa en una situación simulada y replicable. En este contexto, el juego de roles y su resolución permiten controlar variables, aplicar tratamientos homogéneos y alcanzar resultados observables, sin que exista intervención directa por parte de los investigadores. Todo ello proporciona una visión holística, contextualizada y enriquecida del objeto de estudio. En particular, el estudio busca determinar si la aplicación del DT produce resultados más ventajosos frente a la resolución de conflictos mediante enfoques tradicionales o en ausencia de una metodología específica. Para ello, se seleccionaron doce estudiantes de la Maestría en Administración de Negocios de la Universidad de Lima (Perú), provenientes de distintas disciplinas profesionales, quienes no contaban con experiencia previa en situaciones similares a la planteada por el caso. Los participantes fueron distribuidos en dos grupos diferenciados.

En una reunión final, realizada el mismo día y a continuación de ambos ejercicios de *role play*, se procedió al análisis de los resultados obtenidos por cada grupo en dos momentos clave: en la situación inicial, en la que se resolvió el caso sin aplicar ninguna metodología; y en la situación posterior, en la que se resolvió el mismo caso mediante la aplicación del DT. Se utilizó un cuestionario estructurado con preguntas específicas con posibilidades de respuesta con formato escala de Likert, el cual fue aplicado de forma idéntica tanto después del primer ejercicio de *role play* como del segundo.

En las tablas 1 y 2, correspondientes a la sección de análisis y discusión de resultados, se presentan los cuatro rubros de indagación, así como las mismas preguntas utilizadas, junto con las respuestas individuales de cada participante. Al término de la jornada, se realizó una breve entrevista a cada uno de los participantes, las cuales fueron grabadas para ser transcritas posteriormente y analizadas cualitativamente. Los datos obtenidos a través de la encuesta fueron procesados mediante herramientas estadísticas, lo que permitió sustentar el análisis e identificar conclusiones relevantes. El conflicto familiar y el caso desarrollado se encuentran descritos en detalle en el Anexo I. A continuación, se ofrece un breve resumen del caso.

La señora Irina, madre de siete hijos, es heredera del Hotel Montecarlo, uno de los negocios más prósperos del sector. Su hijo mayor (Ricardo) se desempeña como gerente general y la mano derecha de Ricardo (Antonio) ocupa el cargo de gerente de *marketing*. A pesar de la escasa supervisión en la gestión, el hotel se mantuvo estable hasta la llegada de la pandemia de COVID-19. Sin embargo, incluso tras el levantamiento de las restricciones, el negocio no ha logrado recuperarse y las deudas han continuado incrementándose hasta alcanzar niveles críticos.

Debido al estilo de vida de Ricardo, Antonio ha asumido responsabilidades propias tanto de la gerencia general como del Área de *Marketing*. Mientras tanto, los demás hijos de Irina han solicitado que ambos sean retirados de la empresa para poder profesionalizar la gestión y salvar el negocio. Frente a esta situación, con el objetivo de enfrentar el problema, Irina decidió contratar a Walter, un auditor externo, y a Luigi, un director especializado en empresas familiares. Con el tiempo en contra, ambos asesores se cuestionan en qué medida la aplicación del DT podría constituir una herramienta efectiva para abordar esta problemática.

2.1 Notas sobre el caso

Una de las principales formas en que los propietarios intervienen en una empresa familiar es a través de su participación en las operaciones diarias, generalmente asumiendo la gerencia general, ya sea en manos del fundador, durante los años productivos de la primera generación, o de uno de sus hijos en la segunda.

2.1.1 Trabajo de campo

Se conformaron dos grupos con seis integrantes cada uno, en los cuales las mujeres asumieron los roles femeninos del caso y los hombres, los masculinos. Los participantes fueron convocados para analizar y debatir el caso sin ningún tipo de guía, agenda previa ni intervención externa.

En ambos grupos, se identificaron claramente los intereses de los actores. Por ejemplo, el hijo mostró una fuerte intención de mantenerse en el cargo de gerente general, a la vez que defendía la permanencia de su amigo como gerente de *marketing*, considerando que este último asumía muchas funciones propias de la gerencia general ante la ausencia parcial del titular. Por otro lado, los hijos de la propietaria manifestaron su preferencia por incorporar a un profesional externo, ajeno a la familia, para ocupar el cargo de gerente general. La madre, propietaria del negocio, se mostró indecisa al no contar con los criterios suficientes para tomar una decisión firme, lo cual perpetúa tanto el problema sucesorio como los conflictos operativos de la empresa.

Las posibles soluciones discutidas oscilaron entre mantener la actual estructura de gestión familiar y delegar la gerencia general a alguno de los asesores externos, ya sea al auditor o al consultor. El clima inicial de la negociación fue, en términos generales, favorable. No obstante, al concluir el ejercicio, se evidenció cierto deterioro en la atmósfera del grupo. Pese a ello, los participantes reconocieron actitudes positivas, como la cortesía, la flexibilidad, la cooperación, el dominio del tema y la creatividad en sus contrapartes. Aun así, se identificaron dificultades en la gestión del tiempo, a pesar de que la mayoría de participantes se mantuvo activa en la búsqueda de soluciones al caso. Cabe señalar que solo uno de los dos grupos logró alcanzar un acuerdo durante el primer *role play*, el cual fue valorado como satisfactorio en términos de estrategia de negociación. Sin embargo, la viabilidad del acuerdo fue puesta en duda por varios de los participantes, quienes expresaron una percepción de distancia significativa entre lo acordado y sus expectativas personales.

La explicación y posterior aplicación del DT permitió centrar la atención en una metodología común, establecer un objeto de estudio claro y focalizarse en dos aspectos clave: la reestructuración o reorganización de la empresa, y el análisis de la plantilla. El clima durante el segundo *role play* (en el que se aplicó el DT) mejoró en todos los equipos y se mantuvo —o incluso se fortaleció— al término de la sesión debido a factores como la cortesía, la flexibilidad, la cooperación, el dominio del tema y un nivel sostenido de creatividad, en comparación con lo observado en el primer ejercicio. Con la aplicación de la metodología del DT, ambos grupos lograron alcanzar acuerdos, además de que su percepción sobre la calidad y viabilidad de dichos acuerdos mejoró con respecto al primer *role play*.

En conclusión, el nivel de satisfacción expresado por los participantes durante el segundo *role play* mostró un incremento significativo. Asimismo, durante las entrevistas en profundidad, los participantes destacaron que la metodología DT les permitió identificar con mayor claridad el problema, delimitarlo, analizarlo e idear soluciones viables. Ello facilitó la consecución de acuerdos objetivos y alejados de intereses personales. Se evidenció que, mientras que en el primer *role play* la lluvia de ideas fue genérica, poco enfocada y basada en consideraciones sentimentales, en el segundo ejercicio, basado en el DT, el foco se centró en la recuperación y sostenibilidad de la empresa. En particular, se destacó la necesidad de profesionalizar la gestión de la empresa familiar, sobre todo en contextos de crisis como el planteado en el caso.

2.1.2 Consideraciones éticas

Todos los participantes (doce en total) firmaron un formulario de consentimiento informado para participar en la presente investigación. Se les comunicó el propósito del estudio y se les explicó detalladamente el procedimiento. Aceptaron leer el caso, asumir un rol específico dentro de la situación planteada, participar en una negociación sin el uso de ninguna metodología específica y responder un cuestionario relacionado con este primer *role play*.

Asimismo, los participantes accedieron a participar de un breve taller sobre DT, recibir las orientaciones correspondientes, retomar el mismo rol asumido previamente y participar en una nueva negociación aplicando dicha metodología. Posteriormente, completaron nuevamente el cuestionario con el fin de evaluar el nuevo desempeño y, finalmente, participaron en una entrevista grabada para fines de análisis cualitativo.

Por otro lado, se informó a los participantes que no existían riesgos ni molestias potenciales asociados a su participación y que los beneficios podían ser relevantes tanto en lo individual como en lo social. También, se abordaron los alcances de la confidencialidad al asegurar que la identidad de cada participante se mantendría en el anonimato. Finalmente, se aclaró que la participación era completamente voluntaria y que cualquier persona podía retirarse del estudio en cualquier momento sin sufrir consecuencia alguna. El consentimiento informado fue debidamente firmado por todos los participantes. Su contenido se encuentra detallado en el anexo de la presente investigación.

3. ANÁLISIS Y DISCUSIÓN DE RESULTADOS

Los participantes, alumnos o egresados de la Escuela de Posgrado de la Universidad de Lima, son profesionales que ya han cursado un grado académico previo. De acuerdo con la Tabla 3 del Anexo B.1, ellos cuentan con un mínimo de cinco años y un máximo de 18 años de experiencia laboral. Actualmente, trabajan en distintas empresas y sectores, desempeñando funciones diversas.

En la Tabla 1, se presentan los resultados de la encuesta aplicada, basada en una escala de Likert, que evaluó el clima de la negociación durante el *role play* tanto al inicio como al final del ejercicio. La tabla detalla el rol asignado a cada participante, considerando que los doce fueron divididos en dos grupos de seis integrantes. Asimismo, se evaluaron distintas características observadas por los participantes en sus contrapartes durante la negociación, tales como cortesía, flexibilidad, cooperación, conocimiento del tema, nivel de creatividad, gestión del tiempo y solidez de los argumentos. En caso de haberse alcanzado un acuerdo, también se solicitó a los participantes que estimaran su viabilidad, valoraran la distancia entre el acuerdo logrado y su expectativa inicial, y que expresaran su nivel de satisfacción con la estrategia de negociación utilizada.

Tabla 1

Resultados del primer role play

Rol del equipo	Clima		Su contraparte								resultados			Respecto del acuerdo		
	¿Cómo fue el clima inicial de la reunión?	¿Cómo estaba el clima al final de la reunión?	Cortesía	Flexibilidad	Cooperación	Conocimiento del tema	Nivel de creatividad	Gestión del tiempo	Argumentos sólidos	Oyente activo	Acuerdo alcanzado	Si se llegó a algún acuerdo, ¿quién fue el responsable?	Si no se llegó a un acuerdo, ¿quién fue el responsable	Viabilidad del acuerdo	Distancia entre el acuerdo alcanzando y su expectativa	Qué tan satisfecho estuvo con su estrategia de negociación
Walter	6	6	6	5	6	6	6	6	6	6	sí	6	Sí acuerdo	6	Ninguna distancia	6
Irina	4	3	7	7	7	7	7	7	7	7	-	7	-	-	-	-
Irina	7	7	7	7	7	7	6	7	7	7	-	-	-	-	-	-
Antonio	7	7	7	7	7	7	7	7	7	7	sí	7	7	7	7	7
Hijos	7	6	7	7	7	7	7	5	7	6	sí	6	-	-	6	6
Ricardo	5	7	7	7	7	7	7	7	6	7	sí	7	-	-	2	7
Ricardo	4	6	6	6	7	5	5	5	5	4	sí	6	-	-	7	7
Hijos	6	6	6	6	7	5	5	5	5	7	sí	6	6	6	3	6
Hijos	7	5	7	7	7	7	7	4	6	7	-	7	-	-	-	-
Hijos	5	6	5	5	6	7	5	5	6	5	-	6	-	7	7	7
Hijos	6	5	7	7	7	7	7	7	6	7	-	-	-	-	-	-
Irina	7	6	6	6	7	7	7	7	7	7	-	-	-	-	-	-

Cabe destacar que, en algunos casos, los personajes de la madre-dueña (Irina) y el hijo-gerente (Ricardo) experimentaron los peores climas para la negociación. Esto evidencia la existencia de un conflicto latente que simula fielmente una situación de la vida real. De manera similar, esta tensión se manifestó en uno de los participantes que asumió el rol de los hijos, lo cual permitió comprender cómo los problemas de gestión empresarial pueden trasladarse al ámbito relacional dentro del núcleo familiar.

En el Anexo B.2, se presenta un resumen de los puntos abordados durante las diferentes negociaciones, así como las sugerencias formuladas por ambos grupos. De este modo, se observa una dispersión temática en los enfoques adoptados, que van desde solicitar a la dueña una inyección de capital para rescatar el negocio hasta enfrentar objeciones relacionadas con la necesidad de compromiso, reestructuración interna y revisión del rol de empleados clave. Es evidente que los participantes no contaban con información precisa sobre la situación real de la empresa. Por ejemplo, propusieron reducciones en los dividendos cuando, en realidad, estos ya no existían; asimismo, se debatió la posibilidad de disminuir sueldos dentro de la planilla. Claramente, el poder se concentró en las figuras de la madre-dueña y del hijo-gerente. En este primer *role play*, uno de los grupos contrafactuales no logró llegar a un acuerdo.

En relación con la reorganización del negocio, se plantearon líneas de acción diversas, aunque sin resultados concluyentes. Cuando se alcanzó un acuerdo, las prioridades incluyeron la revisión de los resultados financieros del negocio para diagnosticar con precisión la situación, el planteamiento de un plan de acción y la reestructuración de funciones. También, se propusieron alternativas como la reducción de costos asociados al personal.

En cuanto al segundo *role play*, cuyos resultados se detallan en la Tabla 2, se evaluaron los mismos aspectos que en el ejercicio inicial. La diferencia fue que, en esta ocasión, los grupos contaban con indicaciones y explicaciones específicas sobre la metodología DT. Los resultados sugieren que el análisis se centró especialmente en la reducción de la planilla, criterio que guio el enfoque a lo largo de las distintas etapas del DT y de las negociaciones desarrolladas. Cabe resaltar que, en este segundo ejercicio, ambos grupos contrafactuales lograron alcanzar acuerdos, y que tanto el clima de la negociación como la percepción sobre la contraparte mejoraron significativamente en la evaluación final.

Tabla 2

Resultados del segundo role play *con* design thinking

Nombre	Rol en el equipo	Clima		Su contraparte								Resultados			Respecto del acuerdo		
		¿Cómo fue el clima inicial de la reunión?	¿Cómo estaba el clima al final de la reunión?	Cortesía	Flexibilidad	Cooperación	Conocimiento del tema	Nivel de creatividad	Gestión del tiempo	Argumento sólido	Oyente activo	Acuerdo alcanzado	Si se llegó a algún acuerdo, ¿quién fue el responsable?	Si no se llegó a un acuerdo, ¿quién fue el responsable?	Viabilidad del acuerdo	Distancia entre el acuerdo alcanzado y su expectativa	Qué tan satisfecho estuvo con su estrategia de negociación
Individuo 1 -hombre	Walter	6	7	6	7	7	6	7	6	6	6	sí	6	-	6	2	6
Individuo 2 - mujer	Irina	7	7	7	7	7	7	7	7	7	7	sí	-	-	-	-	-
Individuo 3 - mujer	Irina	7	6	7	7	7	7	7	7	7	7	sí	7	-	7	6	6
Individuo 4 - hombre	Antonio	7	7	7	7	7	7	7	7	7	7	sí	7	-	7	7	7
Individuo 5 - hombre	Hijos	5	6	6	6	6	6	6	5	6	6	sí	-	-	7	6	6
Individuo 6 - hombre	Ricardo	7	7	7	7	7	7	7	7	7	7	sí	7	-	7	1	5
Individuo 7 - hombre	Ricardo	5	7	7	7	7	7	7	7	7	7	sí	7	-	7	7	7
Individuo 8 - hombre	Hijos	6	7	7	6	6	5	5	5	5	5	-	5	5	5	4	4
Individuo 9 - hombre	Hijos	7	7	7	7	7	7	7	7	7	7	sí	7	-	7	-	-
Individuo 10 - hombre	Hijos	6	7	4	5	5	7	6	6	6	6	sí	6	-	4	4	6
Individuo 11 - hombre	Hijos	7	7	7	7	7	7	7	7	7	7	sí	7	-	6	2	7
Individuo 12 - mujer	Irina	6	5	5	6	7	7	6	6	6	7	sí	6	-	6	6	6

En el Anexo B.3, se resumen las transcripciones de los acuerdos y soluciones alcanzados en los dos *role play* analizados. Se puede observar que, en el segundo *role play*, en el que se aplica la metodología DT, se evidenció una diferencia sustancial en la posibilidad de alcanzar acuerdos dentro del proceso de negociación. La apreciación crítica de los participantes fue concluyente: once de los doce manifestaron categóricamente que el segundo *role play* cumplió con sus expectativas. Solo un participante no emitió comentarios, ni a favor ni en contra.

El cierre del trabajo de campo, que se llevó a cabo durante una única jornada de tres horas y treinta minutos de trabajo ininterrumpido, se realizó mediante entrevistas individuales. Los resultados de estas entrevistas fueron contundentes en favor de la metodología aplicada. Las respuestas individuales se encuentran detalladas en el anexo del presente estudio.

Siguiendo el modelo de los tres círculos (familia, negocio y propiedad), propuesto por Davis y Tagiuri (1989), los conflictos se clasifican del siguiente modo:

- *Conflictos estrictamente familiares*. Son aquellos que se dan entre los hermanos en relación con el hijo-gerente, entre los hermanos y la madre, o entre la madre-dueña y el hijo-gerente.
- *Conflictos estrictamente del negocio*. Como el conflicto entre el hijo-gerente y el gerente de *marketing* por superposición de roles, o entre los empleados y la alta dirección respecto a la conducción del negocio.
- *Conflictos estrictamente de la propiedad*. Se configura cuando la madre-propietaria, titular de la mayoría accionaria, concentra el poder de decisión y se resiste a profesionalizar la gerencia. Esto frustra a los hermanos, pero no pueden revertir la situación porque carecen de mayoría o de mecanismos de gobierno que les den capacidad efectiva de incidencia (por ejemplo, directorio independiente, protocolo familiar, acuerdo de accionistas). En la práctica, la decisión permanece en manos de la madre-propietaria, quien no logra desvincularse del hijo-gerente, lo que bloquea la profesionalización.
- *Conflictos en la relación de la familia con la propiedad*. Se evidencian en la presión de los hermanos hacia la madre para que inyecte capital al negocio a pesar de no tener claridad en la gestión.
- *Conflictos en la relación entre la familia y el negocio*. Como la formación de bandos dentro de la familia, divididos a favor o en contra de determinados roles gerenciales.
- *Conflictos en la relación entre el negocio y la propiedad*. Ocurre cuando un negocio que genera pérdidas y no utilidades consume los activos de la propiedad, lo que afecta a los propietarios.
- *Conflictos entre las tres esferas (familia, negocio y propiedad)*. Como la inacción conjunta de miembros familiares y no familiares ante la ausencia de una línea clara de acción para enfrentar los problemas existentes.

Como se puede apreciar en la clasificación anterior, el caso simulado representa un entorno fiel a la realidad de las empresas familiares peruanas y se vincula de forma clara con los objetivos del presente estudio. El caso proyecta conflictos en las distintas esferas del modelo de los tres círculos, tanto de forma explícita como implícita. Esto refuerza su pertinencia dentro del marco de los estudios sobre empresas familiares, particularmente en el contexto peruano. A pesar de que el modelo de los tres círculos tiene casi cincuenta años, la literatura académica ha prestado escasa atención al abordaje sistemático de los conflictos dentro de cada esfera y en sus interacciones. Esta omisión se debe, en gran parte, a la preeminencia de otros intereses, como la sucesión, tanto por parte de los empresarios familiares como de los investigadores.

En conclusión, desde un enfoque práctico, la presente investigación demuestra que el DT es una metodología válida para abordar y resolver conflictos en el contexto de la empresa familiar. Desde una perspectiva teórica, contribuye al cuerpo de conocimiento al evidenciar que el DT, además de sus aplicaciones tradicionales, puede ser eficaz en la resolución de conflictos organizacionales.

4. LIMITACIONES Y FUTURAS LÍNEAS DE INVESTIGACIÓN

Una primera limitación es que los participantes enfrentan la misma tarea en dos ocasiones, lo que puede generar un efecto de aprendizaje que mejore el desempeño en la segunda ronda, independientemente de la metodología aplicada. Para mitigar esta situación en investigaciones futuras, se sugiere contrabalancear el orden (diseño cruzado), introducir periodos de *washout* o trabajar con grupos independientes por condición. Asimismo, existe una distancia entre el juego de roles y la realidad organizacional; en consecuencia, la validez externa es acotada y los resultados no son automáticamente extrapolables a entornos reales. Avanzar hacia estudios de campo, experimentos naturales y triangulación con datos conductuales fortalecería la evidencia.

Para robustecer la validez, conviene incluir un mayor número de grupos en paralelo (Forrest-Lawrence, 2018; Gerring, 2017) y replicar el estudio en contextos culturales y geográficos diversos para evaluar la aplicabilidad intercultural (House et al., 2004). También se recomienda complementar la evidencia cualitativa con enfoques cuantitativos o de métodos mixtos que aumenten la generalización (Creswell & Plano Clark, 2018). La aplicación del mismo protocolo en ejercicios de *role play* comparables facilitaría comparaciones sistemáticas (Barter & Renold, 2000). Dado que existen múltiples tipos de conflictos asociados a la gestión en las empresas familiares, una línea de estudio futura es analizar casos adicionales bajo la misma metodología (Sharma, 2004).

Desde el modelo de los tres círculos (familia, empresa, propiedad), resulta pertinente investigar si los conflictos que emergen en cada esfera pueden intervenirse eficazmente mediante el DT (Tagiuri & Davis, 1996). El DT —centrado en empatía, definición precisa del problema y cocreación de soluciones— podría descomprimir tensiones y facilitar acuerdos sostenibles (Brown, 2009; Liedtka, 2015). En la práctica cotidiana, discrepancias intergeneracionales o entre miembros sobre la conducción del negocio pueden derivar en malentendidos, decisiones impulsivas o rupturas cuando no median herramientas específicas (Kellermanns & Eddleston, 2004; Lansberg, 1983), y los procesos de profesionalización suelen detonar reacciones emocionales intensas (Handler, 1994). De allí, la importancia de distinguir las dimensiones emocionales y estratégicas del conflicto (Kellermanns & Eddleston, 2004) y de probar de manera sistemática el DT en entornos reales. Finalmente, se requiere sistematizar el estudio de estos conflictos y desarrollar soluciones estructuradas apoyadas en el DT (Beckman & Barry, 2007; Martin, 2009) con aportes tanto para la teoría como para la gestión.

5. CONCLUSIONES

La presente investigación permitió corroborar la hipótesis de que el DT es una metodología eficaz para facilitar la consecución de acuerdos en conflictos dentro de empresas familiares.

Ambos grupos participantes analizaron el mismo caso; sin embargo, en el primer *role play*, uno de ellos no logró alcanzar acuerdos, mientras que, en el segundo momento, ambos grupos consiguieron resultados positivos en sus negociaciones (Barter & Renold, 2000).

Todos los participantes coincidieron en que el enfoque metodológico, centrado en la identificación de dos objetivos claros y aplicado correctamente mediante el *design thinking*, fue determinante para lograr acuerdos efectivos (Brown, 2009; Liedtka, 2015). En síntesis, se confirmó que el DT es una herramienta valiosa para abordar conflictos en el contexto de empresas familiares, con posibilidades de aplicación en el Perú, que superan en efectividad a los enfoques tradicionales que no emplean metodologías estructuradas.

Asimismo, permitió orientar los esfuerzos hacia objetivos prioritarios y facilitó un proceso más ordenado y constructivo de resolución. La percepción unánime de los participantes respaldó el valor práctico del DT como estrategia para gestionar conflictos de manera más eficiente.

DECLARACIONES

Disponibilidad de datos

Los datos utilizados y analizados durante el desarrollo de este estudio no se encuentran disponibles públicamente, pero pueden ser solicitados al autor correspondiente previa justificación académica.

Uso de inteligencia artificial

No se ha utilizado inteligencia artificial para la redacción, análisis o generación de contenido en este manuscrito.

Conflicto de intereses

Los autores declaran que no existen conflictos de interés relacionados con la elaboración o publicación de este artículo.

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Contribución de los autores (CRediT)

LCC: supervisión académica, validación teórica, revisión y edición del manuscrito.
RAV: conceptualización, revisión de literatura, metodología y redacción del borrador inicial.
ADA: análisis de resultados, sistematización de datos y revisión final.
VOG: apoyo metodológico, revisión bibliográfica y corrección del estilo final.

Aprobación ética

Todos los participantes firmaron un consentimiento informado previo a su participación en la simulación. El estudio fue revisado y aprobado por el Comité de Ética de la Universidad de Lima.

Declaración de originalidad

Los autores declaran que este manuscrito es original, que no ha sido publicado previamente ni se encuentra en proceso de revisión en otra revista. Todos los datos, resultados y conclusiones presentados son producto del trabajo de investigación de los autores.

Declaración de afiliación institucional y revisión independiente

Uno de los autores pertenece a la Universidad de Lima, institución editora de la revista. El manuscrito fue sometido al proceso de revisión por pares doble ciego y gestionado por un editor invitado independiente, siguiendo las recomendaciones de COPE para garantizar la transparencia editorial.

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ANEXO A.

Una sucesión típica: el caso del hotel Montecarlo y aplicación del *design thinking*

1. Contexto del caso

El caso se centra en el hotel Montecarlo, ubicado en San Isidro, Perú. La propietaria (Irina) es heredera de un patrimonio familiar ligado a la minería y recibió el hotel tras el fallecimiento de su esposo, empresario hotelero exitoso. El hotel cuenta con más de 200 empleados e históricamente ha sido rentable, pero la pandemia generó pérdidas significativas y acreedores han iniciado arbitrajes para cobrar deudas.

Irina enfrenta la presión de sus seis hijos para profesionalizar la gerencia y retirar a su hijo mayor Ricardo (gerente general) y a su mano derecha Antonio (gerente de *marketing*). Ricardo está parcialmente ausente, por lo que delega responsabilidades en Antonio. La propietaria contrató a Walter (auditor externo) y a Luigi (consultor experto en empresas familiares y en *design thinking* [DT]) para evaluar soluciones al conflicto.

2. Objetivo del ejercicio

Evaluar la efectividad del DT como metodología para la resolución de conflictos en empresas familiares, comparando los resultados obtenidos mediante enfoques tradicionales sin metodología estructurada.

3. Metodología

3.1 Participantes

- Dos grupos de seis estudiantes de posgrado de la Universidad de Lima.
- Roles asignados: las mujeres asumieron un rol femenino (Irina); los hombres, roles masculinos (Ricardo, Antonio, hijos).
- Total: doce participantes.

3.2 Proceso

1. Primer *role play* (sin DT): resolución del caso sin guía metodológica. Se observó conflicto entre hijos, clima variable y que un grupo logró acuerdo parcial.
2. Segundo *role play* (con DT): introducción a DT, definición de objetivos y roles claros, aplicación de la metodología 5i (identificación, invitación, ideación, iteración e implementación). Los resultados fueron un mejor clima, alcance de acuerdos en ambos grupos, enfoque en reestructuración y profesionalización.

3.3 Herramientas

- Cuestionario tipo Likert para medir clima, cooperación, creatividad, percepción del acuerdo y distancia entre expectativa y resultado.
- Entrevistas finales para consolidar hallazgos cualitativos.

4. Roles de los participantes

- Walter es auditor externo: facilita diagnóstico y propuestas iniciales.
- Irina es propietaria: suele ser decisiva en acuerdos finales, pero indecisa al inicio.
- Ricardo es gerente general: está parcialmente ausente y delega responsabilidades.
- Antonio es Gerente *marketing*: es responsable operativo y de ejecución.
- Hijos son los consejeros: presionan por profesionalización, buscan equilibrio familiar.

5. Resultados del primer *role play* (sin DT)

- El clima de negociación fue irregular y con tensiones visibles.
- Acuerdos: parcial en un grupo y ninguno en el otro.
- Observaciones: prevalecen intereses individuales, falta de estructuración y confusión sobre roles.

6. Resultados del segundo *role play* (con DT)

- El clima fue positivo y de cooperación y creatividad mejoradas.
- Acuerdos: ambos grupos alcanzaron acuerdos prácticos.
- Aspectos destacados: reducción de conflictos relacionales, identificación clara de problemas empresariales y familiares, profesionalización de la gerencia, control financiero y alineación con objetivos estratégicos.

7. Clasificación de conflictos (modelo de los tres círculos: familia, negocio, propiedad)

- Tipo de conflicto y descripción.
- Estrictamente familiar: solo entre hijos y entre hijos con Irina sobre la gerencia.
- Estrictamente del negocio: entre Ricardo y Antonio (conflictos operativos).
- Estrictamente de la propiedad: poder de decisión de Irina sobre la gerencia y el capital.
- Familia-propiedad: presión de hijos sobre la madre para inyección de capital.
- Familia-negocio: formación de bandos en decisiones operativas.
- Negocio-propiedad: pérdidas del negocio que afectan activos de la propiedad.
- Triesferas: ausencia de decisión conjunta frente a problemas críticos.

8. Observaciones finales

- El DT permitió separar conflictos de ideas de conflictos relacionales, fomentar participación estructurada y colaboración, y lograr acuerdos sostenibles.
- Comparación: sin el DT, resolución parcial y desorganizada; con el DT, enfoque iterativo, colaborativo y empático mejora clima y eficacia.
- El DT es útil para preparación de negociaciones y profesionalización de la gestión, especialmente en contextos de crisis o conflictos intergeneracionales.

ANEXO B.1

Perfil profesional y demográfico de los participantes del *role play*

Tabla 3

Características demográficas de los participantes del role play

Nombre	Estudios completados	Trabajo actual	Experiencia laboral (en años)	Sector	Función
Individuo 1 hombre	Ingeniero industrial colegiado	Jefe de control de gestión en Perú y México	13	Consultoría de ingeniería	Finanzas
Individuo 2 mujer	Universitaria completa	Administración	10	Renting	Gestión de administración comercial - indicadores
Individuo 3 mujer	Ingeniero industrial colegiado y estudiante de MBA	Ogreen	5	Medioambiente	Ejecutivo comercial
Individuo 4 hombre	Abogado con especialidad en Derecho Penal	Gerente general del estudio jurídico Better & Reategui	Corte Suprema (13), Fiscalía (5), 15 como litigante	Privado	Gerente general del estudio jurídico Better & Reategui
Individuo 5 hombre	Abogado	Asesor externo en temas ambientales y corporativos	14	Servicios legales	Asesor
Individuo 6 hombre	Licenciado en *Marketing*	Empresas Polar Perú	10	Consumo masivo	Jefe de ventas
Individuo 7 hombre	Ingeniero industrial	Analista comercial en Starbrands S. A.	7	Exportación de productos para el cuidado personal	Analista comercial
Individuo 8 hombre	Licenciado en Ingeniería Industrial	Ejecutivo comercial	6	Industrial (alquiler y venta de maquinaria pesada)	Desarrollo de negocios
Individuo 9 hombre	Ingeniero de sistemas de información	Centro S. A. (Grupo Gloria)	15	Tecnología de la información	Administración de base de datos y continuidad de servicios

(*continúa*)

(*continuación*)

Nombre	Estudios completados	Trabajo actual	Experiencia laboral (en años)	Sector	Función
Individuo 10 hombre	Ingeniero industrial, estudiante de maestría	Universidad de Lima	5	Educación	Jefe de prácticas
Individuo 11 hombre	Universitaria completa	MP Store Agency	18	Manufactura	Gerente de operaciones
Individuo 12 mujer	Contadora pública titulada, estudiante de maestría	Coordinadora del Área Contable	8	Hidrocarburos, construcción	Jefe de RH, analista contable, asistente comercial

ANEXO B.2

Resultados del primer *role play*

Hoja 1 (delantera)

- Ricardo-Irene: inyectar dinero para pagar deudas e invertir en plan de *marketing.*
- Irene-Ricardo: solicitar compromiso, reestructuración y revissión del rol de Antonio.
- Antonio-la familia: enfocarse en la gerencia comercial (para evitar distracción).
- Hijos-Irene/Antonio: solicitar un informe del estado de la empresa y proyección.
- Hijos-Irene: solicitar a Irene la inyección de dinero, pero con reestructuración.
- Hermanos-Irene: reducir los dividendos para dar oxígeno a la empresa.
- Planilla:
  - Reducción de sueldo del gerente general
  - Reducción de forma de pago del gerente general: sueldo básico + comisión / facturación
  - Reducción de dividendos
- Reorganización:
  - Asesor (colocar a Luigi)
  - Gerencia General con auditor
  - Gerencia Comercial (plan de *marketing*)
- Reestructuración:
  - Gerencia General: reducir 50 %
  - Gerencia Comercial: reducir 50 %

- Irina tiene 7 hijos, 200 empleados y el hotel Montecarlo en San Isidro.
- Ricardo es ingeniero industrial y gerente general.
- Debido a la pandemia, el turismo fue afectado después de 40 años. Al pasar de los años, la situación sigue igual.
- Ricardo tiene US$ 13 000; el amigo Antonio, US$ 8000.
- Ricardo no suele estar en el negocio, Antonio funge de gerente general y de *marketing.*
- Los seis hermanos tienen dos años insistiendo en retirar a Ricardo y al amigo. Durante los últimos nueve años, han prestado dinero de su propio patrimonio para cubrir las deudas.
- Irina contrató un auditor externo (Walter), que es director externo en empresas familiares, y a Luigi, que es experto en *design thinking*

Hoja 1 (posterior)

- Preparación: preliminar, estratégico, táctico
- Encuentro: introducción, argumentos/regateo, cierre
- Implementación: *feedback*, cumplimiento, renegociación
- Metodología Harvard:
    1. Separe a las personas del problema.
    2. Focalice en los intereses y no en las posiciones.
    3. Genere opciones de mutuo beneficio y use su creatividad.
    4. Utilice criterios objetivos.
- Modelo ganar-ganar:
    - *Cross cultural* (las 5P: pasaporte, pasado, profesión, protocolo, poder)
- *Design thinking for deals:*
    1. Identificar intereses y necesidades de todas las partes (*stakeholder canvas*)
    2. Proponer “invitados” y tópicos para idear
    3. Idear
    4. *Role play* como iteración
- Metodología de las 5I: identificación, invitación, ideación, iteración, implementación.
- La organización: ¿cómo modificar la plantilla y el plan de acción (reorganizar mercado)?
    - ¿Qué hacemos con la plantilla del hotel?
    - ¿Cómo reorganizar el mercado del hotel?

- Objetivo: lograr un acuerdo con los hermanos/identificar la situación de la empresa y lograr un acuerdo con los hermanos.
- ¿Quieren?: "Sí, quiero lograr el objetivo".
- Pueden hablar con el experto y ver el modelo de la empresa actualmente y ver si se tiene proyecciones para seguir invirtiendo o mejorar la empresa.

Hoja 2 (delantera)

Rol Walter-Auditor externo

Objetivos

- Lograr que mis recomendaciones y acciones resuelvan los problemas económicos y familiares del hotel Montecarlo.
- Ganar prestigio para su consultora.
- Lograr acuerdos de auditoría a largo plazo.

Intereses

- Que sus recomendaciones sean tomadas al 100 % por Irene.
- Que reestructure la planilla con cargos de gestión externos a la familia (Luigi como gerente general).
- Que se coloque a la familia como accionista y evaluarla para repartir un porcentaje de la participación en función a aportes a la empresa.
- Lograr que el hotel Montecarlo sea empresa corporativa y no familiar.

Puede

- No tiene poder más que de su conocimiento como asesor.
- Depende de la decisión de Irene.

¿Cómo reorganizar el mercado del hotel?

1. Analizar a los clientes, servicios actuales, rentabilidad, valor agregado.
2. Abrir nuevos servicios como paquetes de hotel + *tours* por Lima en convenio con agencias de turismo locales. Abrir captación de clientes extranjeros con convenios con agencias extranjeras.

Hoja 2 (posterior)

	Objetivos	Plantilla	Mercado
Irene	Organizar la empresa, salvarla Hijos accionistas	Área de Recurso Humanos, evaluar, rotar personal Accionista hijo Ricardo	Ingresos/gastos de la evaluación financiera Mercado, socios estratégicos con plataformas sólidas

(*continúa*)

(*continuación*)

	Objetivos	Plantilla	Mercado
Hijos	Empresa estable Accionista Ingresos Evaluación de puestos	Evaluación puestos Definir funciones	Lluvia de ideas Estructura empresarial
Ricardo	Mantenerse en la gerencia general Subir a directorio Profesionalizar el negocio	Evaluar las posiciones más eficientes Evaluar a Antonio, en su función de *marketing*	Adherirse a cadena
Hijo	Estructurar núcleo familiar Intereses escudar Rentabilizar empresa	Implementar OKR por objetivos Repotenciar áreas de crecimiento	Evaluación del mercado Nuevas tendencias Diferenciarse

Hoja 3 (delantera)

- Reestructurar la empresa y bandas salariales
- Reducir sobrecosto operativo (eficiencia)
- Tercerizar servicios para sembrar eficiencias operativas
- Sincerar los roles (gerente de *marketin*g)
- Realizar un estudio de mercado sobre tendencias del consumidor en la industria
- Adaptarse al cambio mediante tecnología (apps y web y redes)
- Gestionar membresías con clientes para fidelizarlos y *rewards*
- Crear alianzas estratégicas con entidades bancarias y empresas de turismo
- Crear convenios para brindar servicios adicionales, cobrando rentas y dando mayor exposición:

    1. Eficiencias operativas: tercerizar servicios, identificar sobrecosto operativo
    2. Reestructurar la planilla (mercado): sincerar roles de gerente *marketing*
    3. Salto tecnológico: adaptarse al cambio

Hoja 3 (posterior) - Ricardo

- Su objetivo es mantener el cargo de gerente general y lograr que Irene esté convencida con el plan de acción propuesto para que pague las deudas con su patrimonio.
- Quiere que la empresa siga siendo dirigida por él, mantener el respeto de la familia y, a la vez, que quede también tiempo para él.
- Puede hacerlo si logra, en primera instancia, convencer a Irene de realizar el pago y, luego, llevando a cabo los cambios en el plan de *marketing* y ventas.

Hoja 4 (delantera)

- Directorio familiar
- Reestructuración interna
- Evaluación actual
- Contratación de personal externo
- *Design thinking*

Hoja 4 (posterior)

- Sujetos: Irene, hijos, asesor
- ¿Objetivos? >>> ¿Saben?, ¿quieren?, ¿pueden?
- Identificar objetivos e intereses

Negociación

- Preparación: preliminares, estrategia, táctica
- Encuentro: introducción, argumentos/regateo, cierre
- Implementar: *feedback*, cumplimiento, renegociación

Modelo Harvard

1. Separe personas del problema
2. Foco en intereses y no en personas
3. Genere acciones de mutuo beneficio
4. Utilice criterios objetivos

Negociación *cross-cultural* = 5P

Fortune 500 usa *design thinking* – acuerdos sostenibles/eficaces/eficientes

¿Cómo?

1. Identificar intereses de todas las partes
2. Proponer invitados
3. Idear (*brainstorming*)
4. Participar en el *Role play* como iteración

Metodología de las 5I: identificación, invitación, ideación, iteración, implementación

1. ¿Cómo modificar y qué hacemos con la actual planilla (organización)?: medidas, criterios, propuestas.
2. ¿Cómo reorganizar el mercado del hotel?

Hoja 5 (delantera)

- Preparación: preliminar/estrategia/táctica
- Encuentro: introducción/argumento, regateo/cierre
- Implementación: *feedback*/cumplimiento/renegociación
- Ricardo no está en el negocio
- Antonio funge de gerente general siendo gerente de *marketing*
- Los seis hermanos no desean que siga asumiendo la gerencia Ricardo ni su amigo Antonio
- Contratación a Walter (auditor externo)
- Director externo Luigi

Nos dividimos:

- Caso oral con personajes peruanos: resolver el problema que tiene la familia.
- Decidir con unas nuevas herramientas para negociar:
    1. Separe a las personas del problema.
    2. Focalice en los intereses y no en las posiciones.
    3. Genere opciones de mutuo beneficio (proactividad para dar diferentes opciones).
    4. Utilice criterios objetivos (referencias).

¿Por qué el modelo ganar-ganar?

- Negociación *cross-cultural*: 5P: pasaporte-pasado-profesión-protocolo-poder.
- *Design thinking* aplicado a la negociación: DT4D.
- *Design thinking for deals* (solución a un problema o buscan *approaches*).
- ¿Por qué?: utilizar poder como herramienta para lograr los acuerdos sostenibles/eficaces/eficientes (usar necesidades, usar la ideación).
- ¿Cómo?: idear = *brainstorm.*

Hoja 6 (posterior)

Para mejorar la situación del hotel, se llegaron a estos acuerdos:

- Ricardo presentó en una reunión los estados financieros y los reportes correspondientes al periodo anterior y posterior a la pandemia, alegando que se mantenía vigente y con ganancias hasta que el COVID-19 golpeó el sector turismo. Las deudas vigentes se solicitan pagarlas con patrimonio propio y presentando un plan de acción para los siguientes años recuperar las ganancias y el prestigio del hotel.

- Plan de acción:
- – Reestructuración de las funciones de las gerencias:
  - – Gerente de *marketing* y ventas
  - – Gerente de operaciones
  - – Gerente general
  - – Subcontratar el equipo de Recursos Humanos y definir un nuevo número de empleados
- – Buscar alianzas estratégicas con agencias de turismo, entidades financieras, ofreciendo ofertas para el publico
- – Gestionar eventos con *influencers* y personas virales para mejorar el *marketing* y reputación del hotel
- – Ofrecer membresías para fidelizar clientes
- Después de haber escuchado las propuestas de Ricardo, Irene llega a la conclusión de darle el financiamiento

Hoja 7 (delantera)

- Ideación: identificar necesidades e intereses
- Problema: debido a la pandemia
- Personajes:
  - – Irina: dueña, madre de seis hijos, Ricardo (ingeniero)
  - – Ricardo: gerente general (US$ 13 000)
  - – Antonio: gerente marketing (US$ 8000)
  - – Walter: auditor externo
  - – Luigi: experto en *design thinking*

HOJA 8 (delantera)

- Modificar la planilla (planilla/reorganización del mercado)
- Plan de acción (reorganizar al mercado)
- ¿Saben?: sí, es sacar adelante la empresa. Revisar el estado de la compañía, para poder saber la situación actual
- ¿Quieren?: sí, para poder participar en la organización o estructuración. Contar con la disposición para involucrarse
- ¿Pueden?: se desconoce la especialidad de cada hijo. El nivel de preparación o especialidad no se conoce y no se puede determinar su aporte.

HOJA 8 (posterior)

- Sí se logró el objetivo.
- Se llegó a un acuerdo para sacar a la compañía adelante.

ANEXO B.3

Transcripción de los acuerdos y soluciones

Tabla 4

Transcripción de los acuerdos y soluciones

Nombre/comentario	Primer *role play*	Segundo *role play*
Individuo 1 - hombre	Mercado: • Análisis de tendencias actuales, innovar • Situación actual del hotel (debilidades, fortalezas) • ¿Qué concepto de hotel tiene?(corporativo, turístico) • Determinar objetivos estratégicos (OKR) • Repotenciar *marketing* • Hacer convenios con aliados turísticos estratégicos Planilla: • Se evalúan puestos actuales y definir funciones • Ricardo sale de gerencia y asume directorio • Se rota personal • Se repotencian áreas que aporten al crecimiento • Se reconocen funciones con OKR (objetivos clave-resultados) Objetivo: • Rescatar y estabilizar la empresa • Seguir teniendo ingresos • Reestructurar la planilla	Me pareció más ordenado, ya que cada uno fue con objetivo y preguntas desarrolladas de manera individual y luego fueron debatidas en grupo hasta llegar a un *win-win*.
Individuo 2 - mujer	---	Metodología: • Con una estructura de los pasos a seguir es beneficioso para llegar a los acuerdos planteados. • Tenemos un horizonte de intereses y necesidades de los personajes. • Se lograron planteamientos objetivos e imparciales.

(*continúa*)

(*continuación*)

Nombre/Comentario	Primer *role play*	Segundo *role play*
Individuo 3 - mujer	---	Me pareció interesante que todos los integrantes de mi grupo teníamos los objetivos muy parecidos. Pudimos llegar a un acuerdo de manera satisfactoria, ya que todos buscamos salvar la empresa. Muy interesante el caso.
Individuo 4 - hombre	¿Cómo modificar organización del hotel?	Se llegó a un acuerdo viendo los intereses personales o de los miembros que conformaron. En mi caso:
	¿Qué hacemos con la actual planilla del hotel (con qué ideas opinará) planilla?	Antonio negoció seguir siendo gerente *marketing*.
	¿Cómo reorganizar el mercado del hotel? Plan de acción	Su interés fue seguir trabajando en su puesto.
	Sé, quiero, puedo	Su posición fue ver la mejora de la empresa
Individuo 5 - hombre	---	Interesante la delimitación de las preguntas planteadas. Ambas apuntan a que hay una conexión entre los gastos exorbitantes del personal y los pésimos resultados de la empresa.
		En el grupo, acordamos que el negocio de los hoteles, en formato *business*, ha experimentado un cambio radical desde los años noventa, inclusive más después de la pandemia.
		Finalmente, como grupo también acordamos que la mejor forma de reflotar seria complementar al negocio, buscar operadores especializados que puedan decidirse y colaborar y cooperar por un futuro beneficioso.
Individuo 6 . hombre	---	El segundo *role play* me pareció muy interesante y bueno, ya que todos los integrantes de mi grupo proponían soluciones similares, pero con opciones variables y creativas, así como nuevas propuestas encaminadas a la toma de decisiones, reflote y desarrollo del negocio.
		Al final de la discusión de la situación, logramos ponernos de acuerdo y resolver el caso con la propuesta en consenso.

(*continúa*)

(*continuación*)

Nombre/comentario	Primer *role play*	Segundo *role play*
Individuo 7 - hombre	---	Me parece una buena dinámica coordinar y dar varios puntos de vista para llegar a acuerdos sobre mantener a flote el hotel. Los objetivos fueron cubiertos y se llegó a un consenso sobre el plan de acción a llevar a cabo. El ejercicio de *design thinking* para la negociación me parece una herramienta efectiva, pero conociendo previamente modelos de negociación para no llegar a un conflicto de intereses.
Individuo 8 - hombre	---	El grupo 3 alcanzó un objetivo, pero considero que no lo hizo con claridad ni con metas bien definidas respecto a cómo solucionar los problemas actuales. Además, no se consideraron criterios de sensibilidad familiar, ya que lo crucial es la integridad de la familia como negocio. Dejo a continuación mi posición: • Hijo: Paso 1: reestructurar y conciliar el núcleo familiar / Paso 2: rentabilizar la empresa con un plan de acción. • ¿Qué hacer con la plantilla del hotel? OKR > priorizar los objetivos de la empresa para tomar decisiones de reducción de planilla. • ¿Cómo reorganizar el mercado del hotel? Estudio de mercado > nuevas tendencias del sector (diferenciado con un plan de acción).
Individuo 9 - hombre	---	Comentario del segundo *role play*: • Las ideas se basaron en los objetivos planteados. • Todas las ideas fueron aceptadas y se fueron seleccionando las que aportaban valor en consenso. • Participación de todos los integrantes del equipo.
Individuo 10 - hombre	---	Se logró identificar el objetivo como grupo y dr llegó a un acuerdo, ya suponiendo cada uno su rol.
Individuo 11 - hombre	---	---
Individuo 12 - mujer	---	Me pareció muy interesante el caso y esto me ayudó a tomar la decisión de apoyar a mis padres en su negocio e involucrarme más en el negocio de mis padres, ya que en un futuro será mío.

ANEXO B.4

Transcripción de entrevistas finales a participantes

Video 1 (duración 0:23)

Respecto a este método (*design thinking*), las 5I nos ayudó a identificar la invitación, ideación, iteración e implementación. Y, con el caso, hemos llegado a un acuerdo tanto los hijos como la mamá y, después, con el experto. Además, nos ayudó en muchas cosas, sobre todo para explicar y llegar a la metodología *win-win*, para ganar todos.

Video 2 (duración 0:32)

La metodología es superinteresante, porque nos ayudó a identificar, en primer lugar, el problema; luego, quiénes serían las personas que podrían ayudarnos a solucionar este problema. Después de ello, viene la ideación con base en los intereses y las necesidades de todos los involucrados y, finalmente, llegar a un consenso: un acuerdo que no esté relacionado netamente con intereses personales, familiares, sino realmente ser objetivos, claro.

Video 3 (duración 0:29)

De hecho, entre la primera y la segunda dinámica, en la primera velas por tus propios intereses para saber que necesitas estar a cargo de la empresa. Sin embargo, en la segunda dinámica, se ve una cooperación, porque tiene un objetivo en común, que es el salvar el hotel; además, se llega a un buen consenso y el *design thinking* en los negocios es bien aplicado.

Video 4 (duración 0:20)

Tal como comentan mis compañeros, me pareció bastante más ordenada esta segunda interacción, ya que primero la resolvimos individualmente y, cuando la debatimos en grupo, escuchamos ordenadamente los objetivos, las soluciones y llegamos a un consenso que nos llevó a un *win-win*.

Video 5 (duración 0:37)

Sí, esta metodología ha sido interesante. En la primera ronda, el método del *brainstorming* fue genérico; después de haber estudiado el caso, hubo opiniones con sentimentalismos y hubo opiniones objetivas. Pero, después de la segunda ronda, ya nos enfocamos más hacia el objetivo al que queríamos llegar. Entonces, después de haber organizado los intereses de cada uno de los personajes, en conjunto pudimos hallar de manera objetiva cuál podría ser la solución y el planteamiento de la solución.

Video 6 (duración 0:41)

El caso del día de hoy me ha parecido muy interesante. Con esta metodología he aprendido cómo abordamos el problema principal: todos quieren salvar la empresa, pero también quieren ver cómo lo solucionamos. Esta metodología me ha ayudado a comprender que la opinión de cada *stakeholder* es muy importante y que todos estaban buscando un solo fin, que era salvar la empresa. Hasta donde llegamos con mi grupo, pudimos ponernos de acuerdo muy rápido, porque teníamos los mismos objetivos. También me ayudó la metodología a identificar los intereses y el posicionamiento de cada uno.

Video 7 (duración 0:36)

Me pareció muy buena, porque empiezas a identificar todos los problemas. Lo otro es que comienzas a conocer la manera de pensar de cada uno de los integrantes o *stakeholders* que integran la empresa y podemos atacar con cada uno a detalle para ver sus intereses y llegar a un acuerdo. Ahorita, estamos en pleno proceso, pero cada vez se trabaja más con un tema de conciliación —de llegar a un solo fin, a un solo objetivo—, lo que me parece espectacular.

Video 8 (duración 0:37)

Como dice mi compañero, a mí también me pareció muy interesante ... Tengo un amigo, cuyos padres tienen empresas. Observo que él no se dedica, no se involucra en su empresa, no le toma mucho interés, por lo que, al leer este caso, le recomendaría que se involucre. Como sus padres tienen una empresa (un apoyo), debe trabajar en ello, involucrarse más, porque en un futuro eso quedará para él. Y como dice mi compañero, trabajar en grupo y dar muchas ideas llevan a una conclusión mucho mejor.

Video 9 (duración 1:27)

Mi punto de vista fue que este caso fue bastante enriquecedor. ¿Por qué? Porque hemos visto un caso actual y real: un caso familiar. Cuando hay empresas familiares, todo va bien, generan ingresos, pero no se ve más allá. No se ve desde el inicio, es decir, la etapa de profesionalización que nosotros hemos visto, cómo todos nosotros somos profesionales. Lo hemos visto desde un punto más profundo. No solo cuando el problema ocurre, cuando hay una pandemia, cuando se dejan de generar los ingresos que generan, sino desde una etapa inicial. ¿Para qué? Para que un negocio vaya en esa etapa profesional hacia adelante y, bueno, surja mediante con ello. Y, como hemos visto todos, hemos llegado a un consenso con los compañeros que me ha tocado trabajar. ¿Qué es lo que buscábamos? El reflote de la empresa, que siga creciendo y usar la experiencia de las personas que están adentro. Por ejemplo, existen casos en los que esa persona que, de repente, no tuvo la responsabilidad de tener cargos gerenciales desde un inicio, porque simplemente, como pasa en algunas empresas, le tocó hacerlo o porque era el que seguía el cargo, no necesariamente era la persona idónea según su experiencia. Pudo hacer lo que pudo, pero no fue más allá a realizar la siguiente etapa, a ser la persona profesional dispuesta a solucionar los problemas que se presentaban. Igual, emplean a esta persona para que pueda dar aportes desde la poca experiencia que tiene, adquirida en los años que ha trabajado, y así dar el siguiente paso paso hacia una gestión más profesional, permitiendo el ingreso de gente nueva, con nuevas ideas, nuevos contactos, nuevas expectativas y renovación.

Video 10 (duración 0:32)

La metodología presenta un proceso claro para explicar la problemática y me parece muy importante para identificar tanto los intereses individuales como los intereses comunes, que es un beneficio conjunto para todos. Y, por último, esta metodología permite identificar, priorizar cuáles son los objetivos y darles prioridad para identificar realmente el problema.

Video 11 (duración 0:40)

De igual forma, creo que ha sido interesante que, sobre todo, en esta segunda parte, hemos identificado elementos que nos unían con los demás. Por ejemplo, el saber o identificar que teníamos un sobrecosto en la planilla y que, de alguna forma u otra, necesitábamos el negocio y mejorar el negocio. Y eso nos ha abierto un poco la cabeza a pensar en otras alternativas que se complementan con nuestros objetivos e intereses y no centrarnos solamente en lo que veníamos pensando en la primera parte del ejercicio, sino en cómo realmente generar sinergias con las demás ideas.

Video 12 (duración 1:34)

Principalmente, es reconocer con este método, que aplica el *design thinking*, el desinterés que tienen tanto la madre como los hijos por la empresa para recién darse cuenta que el problema existe cuando este es visible. Lo lógico hubiera sido que ellos hubieran estado permanentemente viendo la empresa para que no ocurra el problema. En cuanto al primer problema, solamente el padre enseñó el trabajo a un hijo en lugar de hacerlo con todos, por lo que no todos estuvieron comprometidos dentro de la empresa durante el periodo que funcionó la empresa; es decir, no se debe llegar en momento crítico para que recién los hermanos digan lo mal que se hicieron las cosas. Si no se aportó, si no apoyó: es fácil reclamar. Pero, para ser parte de la solución, también tienes que experimentar el problema. Tienes que comprometerte a estar dentro de la empresa y ver los problemas de la empresa para dar soluciones, pero es más fácil ser externo y criticar. Pienso que este método nos ha enseñado bastante para entender que no solamente el problema nace por un mal gerente o porque el hermano no hizo su función o designó a una persona como gerente de *marketing* para que cumpla la función de gerente general, que no era su función. Eso nos enseña a nosotros a que hay que tener mayor cuidado en las empresas familiares para poder todos participar dentro de la empresa y hacerla crecer. Cuando el problema surja, se debe levantar la empresa, pero reconociendo todos cuál es el problema en sí.

FOREIGN MARKET ENTRY MODES: THE INTERNATIONAL EXPANSION OF SPANISH WINERIES

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Abstract

Objectives: Most of the existing literature on the export behavior of small firms examines two single-stage decision-making processes—whether or not to export, and which export mode to use—or integrates both decisions simultaneously into a single-stage model. This article proposes that the export decision and the choice of export channel are nested and non-independent. In light of the above, this study aims to test different entry mode choice processes: independent decisions versus nested and non-independent decisions. **Methodology:** The study estimates and compares two models: (i) a simultaneous single-stage model with three entry mode choices, analyzed using a multinomial logit model, and ii) a two-stage model with the export decision preceding the channel decision, analyzed using a sequential logit model. **Results:** Resource-based factors are used to determine these internationalization decision-making processes, and empirical analysis is conducted on a DOCa Rioja sample of 177 firms. Using the Akaike and Schwarz information criteria, the empirical evidence supports a nested structure in which the export decision precedes the export mode decision. The implications and contributions of these findings are discussed. **Originality:** This hierarchical perspective of the choices involved in the process is noteworthy for two reasons. First, it supports the idea that people have limited analytical capacity. Managers often break down complex decisions into a hierarchical process to make them more manageable. Second, it acknowledges that important differences exist between entry modes.

Keywords: sequential logit model, two-stage choice process, export mode, wine industry
JEL: F23, L66, M16

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MODOS DE ENTRADA AL MERCADO EXTRANJERO: LA EXPANSIÓN INTERNACIONAL DE LAS BODEGAS ESPAÑOLAS

Resumen

Objetivos: la mayor parte de la literatura sobre el comportamiento exportador de las pequeñas empresas examina dos procesos de toma de decisiones de una sola etapa —si exportar o no hacerlo, y qué modo de entrada utilizar—, o bien integra ambas decisiones simultáneamente en un modelo de una sola etapa. Este artículo propone que la decisión sobre exportar y la elección del canal de exportación son decisiones anidadas y no independientes. A la luz de lo anterior, el objetivo de este estudio es probar diferentes procesos de elección del modo de entrada: decisiones independientes y decisiones anidadas y no independientes. **Metodología:** la metodología estima y compara los siguientes dos modelos: (i) un modelo simultáneo de una sola etapa con tres elecciones de modo de entrada (utilizando un modelo logit multinomial); ii) un modelo de dos etapas con la decisión de exportación precediendo a la decisión del canal utilizando un modelo logit secuencial. **Resultados**: el estudio utiliza factores basados en recursos para determinar estos procesos de decisión en materia de internacionalización y lleva a cabo un análisis empírico utilizando una muestra de 177 empresas de la DOC Rioja. Utilizando los criterios de información de Akaike y Schwarz, la evidencia empírica apoya la existencia de una estructura anidada, donde la decisión de exportar precede a la decisión del modo de exportación. Se discuten las implicaciones y contribuciones de los hallazgos. **Originalidad:** esta perspectiva jerárquica de las elecciones involucradas en el proceso es atractiva por dos razones. En primer lugar, apoya la idea de que las personas tienen una capacidad analítica limitada. Los gerentes a menudo descomponen una decisión compleja en un proceso jerárquico porque esto la hace más manejable. En segundo lugar, reconoce que existen diferencias importantes entre los modos de entrada.

Palabras clave: modelo logit secuencial, proceso de elección en dos etapas, modalidad de exportación, industria del vino

1. INTRODUCTION

Yes, we really do need more entry mode studies!
Jean-François Hennart and Arjen H. L. Slangen

The literature has traditionally analyzed the export activity of firms through multiple perspectives because of the various sub-decisions involved in the decision-making process (Li et al., 2024). The basic choice made by firms—i.e., whether or not to export to foreign markets—is usually discussed in the literature on probabilistic choice as a single decision (Chen et al., 2016), often using binomial logit models (García et al., 2002). If the focus is on the method of exporting, authors usually consider a single decision: selecting one entry mode among several alternatives, defined in terms of commitment and control (e.g., selling through external intermediaries, engaging in joint ventures with a foreign distributor, or creating one's own export channel). In such cases, they apply binomial and/or multinomial logit models (Hessels & Terjesen, 2010). Another line of research combines both decisions, generating three entry mode choices: no export, export without one's own channel, and export with one's own channel. This approach analyzes these three choices simultaneously in a single-stage process to choose only one (Merino & Salas, 2001).

As an alternative to previous research, Pan and Tse (2000) and Kumar and Subramaniam (1997) argue that the entry mode decision is a more complex process, with a natural hierarchy among the various modes of entry. They regard the choice between equity and non-equity modes as the first level of hierarchy. After this first choice, firms decide a specific mode within equity (wholly owned operations versus equity joint ventures) or non-equity modes (contractual agreements versus export). To test this process, Pan and Tse (2000) use a hierarchical model, because it resolves the problem of the assumption of independence from irrelevant alternatives (IIA), making it more suitable for the analysis of multi-choice decisions.

Following this multi-stage approach, we propose that the decision to sell abroad and the choice of export channel (indirect versus direct export) are nested and non-independent. We thus assume that firms make two sequential decisions before arriving at their final choice: whether to enter foreign markets and which channel to employ.

This hierarchical perspective of the choices involved in the process is noteworthy for two reasons. First, it supports the idea that people have limited analytical capacity (Simon, 1955). Managers often break down complex decisions into a hierarchical process to make them more manageable (Steinbruner, 1974). Second, it acknowledges that important differences exist between entry modes (Anderson & Gatignon, 1986).

In light of the above, this study aims to test different entry mode choice processes: independent decisions versus nested and non-independent decisions. To this end, the study estimates and compares two models: (i) a simultaneous single-stage model with three entry mode choices, analyzed using a multinomial logit model, and ii) a two-stage model with the export decision preceding the channel decision, analyzed using a sequential logit model. Resource-based factors are used to determine these internationalization decision-making processes, and empirical analysis is conducted on a DOCa Rioja sample of 177 firms.

2. LITERATURE REVIEW

Previous research on entry mode choice in international markets has assumed that this is a single-stage, rational, analytical decision made by a manager or a team of managers (Kumar & Subramaniam 1997). Much of the literature presumes that managers consider all entry modes at the same level and that each factor is given equal importance. However, Simon (1955) recognized that human analytical capacities and resources are limited and there is thus no satisfactory analytical method for resolving complex problems. Decision makers address problems according to a cognitive strategy known as "bounded rationality," which leads them to "satisfice" rather than optimize when choosing among several options (Ruiz-Moreno et al., 2007; Simon, 1955).

According to the cybernetic decision-making model proposed by Steinbruner (1974)—which is a combination of the notions of satisficing and models for cognitive processes—decision makers break down both the problem and the environment into stable subsystems. They simplify the decision-making process by sequentially eliminating alternatives that fail to meet a certain threshold, based on key criteria. These strategies can be described as heuristic processes.

Following Kumar and Subramaniam (1997), given the diversity of entry modes, some are more similar to one another than others; therefore, a natural hierarchy exists among them. Entry mode choice then follows a hierarchical process in which managers first structure the alternatives into a multi-level hierarchy and define a set of evaluation criteria for each level (Pan & Tse, 2000).

This hierarchical (or "cybernetic") decision-making strategy is supported by the works of Kumar and Subramaniam (1997) and Pan and Tse (2000), who propose hierarchies that better reflect the general behavior of managers in the entry mode choice. Specifically, Pan and Tse (2000) propose a natural hierarchy in which the first stage differentiates equity from non-equity modes, and the second stage classifies non-equity modes as exporting and contractual agreements, while equity modes are categorized as equity joint ventures and wholly owned subsidiaries.

Drawing upon the previous literature, this research proposes that entry mode choice can be examined from a hierarchical perspective, where "exporting versus non-exporting" and "direct exporting versus indirect exporting" are nested and non-independent decisions. Then, we ask: Is this two-stage decision-making process superior to the single-stage decision-making process? Based on this premise, the following hypothesis is proposed: A hierarchical decision-making process is superior to a single-stage decision-making process in the choice of direct or indirect export.

Several theoretical approaches have been used to study foreign entry mode choice. This research focuses on the resource-based view, as it is helpful for explaining the extent of both the export (export versus non-export) and the channel (direct versus indirect export) choices (Canabal & White, 2008; López Rodríguez & García Rodríguez, 2005).

2.1 Determinant Factors

2.1.1 Regarding the Export Decision

According to the resource-based view, firms' competitive advantages significantly impact on export behavior (Barney, 1991; Hitt et al., 1997). A firm may gain a competitive advantage in foreign markets by deploying a wide range of strategic resources and core competencies.

The ability of a firm to provide differentiated products is one of the key factors in its expansion or internationalization. Differentiation allows firms to tailor products to customer requirements or develop higher-quality products (López Rodríguez & García Rodríguez, 2005). From this perspective, Styles and Ambler (1994) argue that product strength—in terms of quality and uniqueness—is a key element in the export success of many companies. Similar conclusions have been reported by Burton and Schlegelmilch (1987), Cavusgil et al. (1993), Madsen (1989), and McGuinness and Little (1981).

Human capital in terms of educated workers and managers may be crucial for generating internationalization capabilities (Rialp et al., 2002). Consistent with this view, previous literature have suggested that human capital and exports appear to go hand in hand during the growth process (Contractor & Mudambi, 2008).

The relationship between firm size and export behavior has been widely analyzed in the international business literature (Pla-Barber & Alegre, 2007). The resource-based view, like the majority of theoretical explanations, suggests a positive relationship between firm size and exporting (Dhanaraj & Beamish, 2003). Larger firms are better positioned to absorb the risks associated with foreign market entry, possess greater economies of scale, and have more financial resources to overcome the fixed or sunk costs of becoming exporters (Bernard & Jensen, 1999; Majocchi et al., 2005; Verwaal & Donkers, 2002; Wagner, 1995). Empirical evidence supports that larger firms are more likely to export (López Rodríguez & García Rodríguez, 2005).

International business literature also suggests that long-established firms may have accumulated a stock of knowledge that allows them to build their capabilities and achieve better leverage to compete in global markets. However, it is also argued that mature firms may be more rigid, while newly created firms may be more flexible, aggressive, and proactive in entering foreign markets (Lefebvre & Lefebvre, 2002).

Foreign ownership of a firm's capital may also facilitate entry into international markets as a result of the international experience inherent in such ownership. Firms with foreign owners are often familiar not only with conditions in their home country but also with information on other international markets. Consequently, firms with foreign ownership are generally more likely to start exporting (Wignaraja, 2002).

Finally, the resource-based view highlights that the implementation of a website provides firms with information and communication capabilities which assist domestic firms in the export process (Bennett, 1997; Hornby et al., 2002). In particular, the internet helps firms to communicate with customers, suppliers, and business partners at no cost, regardless of time and distance.

2.1.2 Regarding the Export Channel Decision

The most common methods of exporting are: (i) exporting directly to customers abroad or (ii) exporting indirectly through an intermediary.

Export intermediaries perform an important "middleman" function by linking firms and customers in geographically distinct markets that might otherwise remain unconnected. A number of different intermediaries can be involved, ranging from agents and distributors—whether domestic or foreign—to local subsidiaries of multinational enterprises (MNEs). This indirect export mode enables firms to avoid the direct trade costs of entering international markets. Export intermediaries often help their clients save the costs associated with searching for new customers, monitoring contract enforcement, and helping them to take advantage of the intermediaries' contacts, experience, and knowledge of foreign markets (Hessels & Terjesen, 2010; Peng & York, 2001).

Firms may hire export intermediaries to reduce uncertainties and other risks associated with operating in foreign markets. Moreover, the use of such intermediaries may enable firms to perform certain export-related functions more efficiently or at a lower cost than they could on their own, for example, when the intermediaries have the know-how required to enter foreign markets (Li, 2004). However, using export intermediaries also involves transaction costs and commissions (Acs & Terjesen, 2007). Another disadvantage is the potential loss of control over how the product is marketed and serviced (Blomstermo et al., 2006; Fernández-Olmos et al., 2024). Highly differentiated products require greater management skills and more specific asset investments (Rialp et al., 2002). For this reason, the degree of product differentiation may be a significant factor in determining if direct exporting is the preferred option. Empirical evidence for this theory can be found in Anderson and Coughlan (1987), who found that markets characterized by product similarity and price competition were more successfully handled by agents and distributors.

Compared to indirect export modes, direct exporting requires a large commitment of human resources. Consequently, firms lacking sufficient human resources are more likely to prefer indirect exporting. The same reasoning may be applied to firm size. Since indirect exporting involves a smaller commitment of financial resources than direct exporting (Johanson & Wiedersheim-Paul, 1975), the literature predicts that smaller firms tend to prefer the indirect export mode (Campa & Guillén, 1995; Osborne, 1996; Rialp et al., 2002).

Export intermediaries may be particularly beneficial for young firms with limited business experience, as they face greater risks and uncertainty during internationalization process (Peng & Ilinitch, 1998). In contrast, older firms that have clear competitive advantages derived from their market knowledge may be less likely to need to rely on intermediaries.

At the theoretical level, foreign-owned firms are more likely to have technical, economic, human, and informational resources than firms without foreign investment participation. These resources may encourage them to create their own export channels (Rialp et al., 2002).

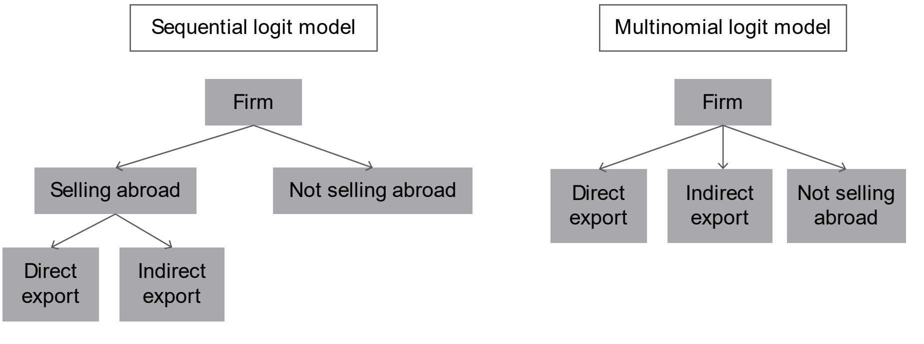
Finally, it is generally assumed that the internet allows firms to exchange information with their customers, suppliers, and business partners abroad without setting up and maintaining expensive networks (Amarasena, 2008). Thus, the internet is expected to reduce firms' reliance on intermediaries to identify and communicate with international customers.

3. METHODOLOGY

To test whether the two-stage model is superior to the single-stage decision-making process in the choice of export mode (Hypothesis 1), this study assesses two models. First, a simultaneous single-stage model is estimated with three different entry modes (no export, indirect export, and direct export), using a multinomial logit model. Second, a two-stage model is evaluated with the export decision preceding the export channel decision. In the first stage, the choice is whether or not to export. Firms which choose to export in the first stage go on to a second stage, in which they decide between direct and indirect export modes. A sequential logit model is used to assess the abovementioned two-stage model (Figure 1).

Figure 1

Alternative Logit Models



Specifically, a sequential logit model represents an alternative to the more traditional multinomial logit model, as it avoids the assumption of independence from irrelevant alternatives (IIA). IIA, a property of the multinomial logit model, implies that adding another alternative does not affect the relative odds between two given alternatives. However, this implication is unrealistic in applications with similar characteristics.

For instance, consider a firm that is planning to export and must choose between two channels: its own export channel (direct export) or an intermediary abroad (indirect export). If an additional intermediary with the same characteristics is introduced, the multinomial logit model would—regardless of the likelihood of being chosen—proportionally reduce the probability assigned to each existing option. However, intuition suggests that the probability of choosing direct export should remain the same. Suppose the initial probabilities for each of the two options are 1/2, once the third option (the new intermediary) is added, the multinomial logit model assigns an equal probability of 1/3 to each option. A statistical explanation for this phenomenon lies in the violation of the assumption of independence of the random term (Debreu, 1960; Nicolau & Más, 2008).

In the multinomial model, the response variable consists of a collection of purely discrete, unrelated categories. By contrast, in the sequential model, the response categories can be perceived as a sequence of stages, where subsequent decisions are nested within the earlier ones (Liao, 1994). In our study, the export decision follows a two-stage sequence: first, whether a firm plans to export, and second, whether it will adopt the direct export mode.

y = 1, if the firm decides not to export
y = 2, if the firm decides to export indirectly through an intermediary
y = 3, if the firm decides to export directly to customers abroad

The related probabilities can be expressed as follows (Amemiya, 1975; Maddala, 1983):

$$P_1 = F\left(\sum_{k_1}^{K_1} \beta_{k_1} x_{k_1}\right)$$

$$P_2 = \left[1 - F\left(\sum_{k_1}^{K_1} \beta_{k_1} x_{k_1}\right)\right] F\left(\sum_{k_2}^{K_2} \beta_{k_2} x_{k_2}\right)$$

$$P_3 = \left[1 - F\left(\sum_{k_1}^{K_1} \beta_{k_1} x_{k_1}\right)\right]\left[1 - F\left(\sum_{k_2}^{K_2} \beta_{k_2} x_{k_2}\right)\right]$$

Where the subscripts k1 and k2 denote the sets of variables included in Stages 1 and 2, respectively. The parameter βk1 is estimated by dividing the full sample into two groups: firms that do not export and those that do. The Stage 2 parameter βk2 is estimated from the subsample of exporting firms, which is divided into two groups: those who have chosen direct exporting and those who have chosen indirect exporting.

3.1 Dependent Variables

To estimate the single-stage simultaneous model, this research uses a polychotomous variable with three options: (i) non-exporting, coded as 1 if chosen and 0 otherwise; (ii) indirect export, coded as 1 if chosen and 0 otherwise; and (iii) direct export, coded as 1 if chosen and 0 otherwise. For the two-stage model, two dummy variables are used: (i) export decision, where 1 indicates exporting and 0 non-exporting; and (ii) export channel, where 1 denotes direct and 0 indirect.

3.2 Independent Variables

3.2.1 Product Differentiation

Previous studies (Anderson & Coughlan, 1987; Coughlan, 1985; Coughlan & Flaherty, 1983) have measured product differentiation with dummy variables coded as 1 for highly differentiated goods and 0 for less differentiated goods. The Regulatory Council of the DOCa Rioja classifies Rioja wines according to their added value. In Spanish nomenclature, the first group includes mostly "guarantee of origin" wines, which have not been aged in oak casks. The second group includes "crianza" wines, which have been aged for at least three years, with one year in oak casks. Finally, the third group comprises "reserva" and "high profile" wines, which are carefully selected and represent the highest-quality categories underpinning the DOC's great reputation and quality. Following this classification, product differentiation was defined as the percentage of a winery's production represented by this category.

3.2.2 Human Capital

The literature on human capital theory often uses employee education level as an indicator of labor productivity. In this paper, we include the proportion of employees holding university degrees as a proxy for human capital, using the approach proposed by Plechero and Chaminade (2010).

3.2.3 Firm Size

Following previous studies (Brouthers et al., 2003; Goerzen & Beamish, 2003), firm size is operationalized as the number of employees, expressed in logarithmic form to remedy the significant positive skew (Tabachnick & Fidell, 2001). Hessels and Terjesen (2010) also employ the natural log of firm size.

3.2.4 Firm Age

Similarly to other empirical studies (Bouquet et al., 2004; Delios & Henisz, 2003; Majocchi et al., 2005), firm age is measured through a logarithmic transformation.

3.2.5 Foreign Investors

A dichotomous variable was constructed to indicate whether the firm has foreign ownership in its capital structure, as outlined by López Rodríguez and García Rodríguez (2005).

3.2.6 Internet

This variable was measured through a direct question which enabled us to create a dummy coded as 1 if the firm had its own website and 0 otherwise. This measure has been used in various studies (Dejo-Oricain & Ramírez-Alesón, 2009; Nieto & Fernández, 2005).

3.3 Sample Data and Variables

The main sources used to obtain the list of wineries in the target population were the directories issued by the Regulatory Council of the DOCa Rioja. Data for this study were collected through a structured survey conducted in 2010. The population was based on the 2007 list provided by the Regulatory Council of the DOCa Rioja. The sample was selected from a population comprising wineries that met the following criteria: (1) belonging to the DOCa Rioja, (2) operating as wine-making processors, (3) required to submit accounting information to the authorities, and (4) not organized as cooperatives. Usable responses were obtained from 177 wineries (83 %).

4. DATA ANALYSIS

A preliminary analysis was conducted to determine the relationships between pairs of independent variables. The Kolmogorov–Smirnov test indicated that the variables were not normally distributed; consequently, Pearson's correlations were deemed inappropriate. Instead, Spearman's correlations were computed for each pair (Table 1). The correlations ranged from −0,08 to 0,39, indicating weak to moderate associations. Additionally, the variance inflation factor (VIF) was calculated for each of the regression coefficient. The maximum VIF obtained across the three models was 2,10, well below the conservative cut-off of 10 typically considered acceptable for multiple regression models (Hair et al., 1998; Neter et al., 1985).

Table 1

Spearman's Correlations and Variance Inflation Factors

Variables	1	2	3	4	5	6	VIF
Differentiation	1,00						1,15
Human Capital	0,08	1,00					1,01
Size	0,32**	0,06	1,00				1,34
Age	0,18*	0,06	0,11	1,00			1,08
Foreign Investors	0,02	-0,05	-0,08	-0,04	1,00		1,01
Internet	0,27**	0,13	0,39**	0,11	-0,05	1,00	1,20

Note. ** prob < 0,01; * prob < 0,05.

Table 2 shows the means of the variables for each functional group, as well as the ANOVA test results evaluating differences across the groups. As expected, several of these differences are statistically significant.

Table 2

Summary Statistics (Means and Standard Deviations) of Independent Variables and Results of ANOVA Tests

Variables	Entire Sample (n = 177)	Non-Exporters (n = 39)	Indirect Exporters (n = 35)	Direct Exporters (n = 103)	F-Test	Significance
Differentiation	22,27	6,21	18,80	29,53	11,04	0,000
% "Added Value" Wines	(28,35)	(9,66)	(25,24)	(31,36)		
Human Capital	0,22	0,20	0,17	0,24	1,30	0,276
% University Employees	(0,23)	(0,29)	(0,20)	(0,21)		
Size	1,79	0,85	1,53	2,24	29,80	0,000
Ln(Employees)	(1,13)	(0,63)	(0,95)	(1,10)		
Age	3,14	2,94	3,13	3,21	1,16	0,316
Ln(Years)	(0,96)	(0,96)	(0,80)	(1,01)		
Foreign Investors	0,10	0,05	0,14	0,10	0,89	0,414
Dichotomous Variable	(0,30)	(0,22)	(0,36)	(0,30)		
Internet	0,77	0,46	0,69	0,91	20,70	0,000
Dichotomous Variable	(0,42)	(0,51)	(0,47)	(0,28)		

This section examines alternative decision-making processes for entry mode (no export, indirect export, and direct export) using two logit-type models (Tables 4 and 5). Among the various model selection methods using information criteria, the Akaike and Schwarz information criteria (AIC and SIC) are the most widely applied in practice. This study employs both criteria, defined as:

$$AIC = \left[-2\, log\left(L_n(k)\right) + 2\mathrm{k}\right]/n$$

$$SIC = \left[-2\, log\left(L_n(k)\right) + k\, log\,(n)\right]/n$$

Where Ln(k) is the maximum likelihood of a model with k parameters based on a sample of n observations.

A model with many parameters will provide a very good fit to the data, but it will have few degrees of freedom and limited utility. These models, in addition to considering the likelihood function, promote parsimony by imposing a penalty for including too many terms in a regression model. The preferred model is the one with the lowest AIC and SIC values.

Table 3 shows the fit of each model for the two decision-making processes proposed: (i) Model 1, a simultaneous single-stage structure with three entry mode choices; and (ii) Model 2, a two-stage model in which the first stage determines whether to export, and the second stage specifies the export channel (direct versus indirect).

Table 3

Comparison of Model Structures

	Model 1: Multinomial Logit	Model 2: Sequential Logit
AIC	287,233	284,283
SIC	331,699	328,749

Using the minimum AIC and SIC, the two-stage structure (Model 2) provides the best fit. This finding indicates that the optimal structure to represent the export decision sequence is a nested one, with a first stage in which managers decide whether or not to export, followed by a second stage in which those who decide to export choose between indirect and direct export channels. Consequently, Hypothesis 1 is not rejected, as the results show that the hierarchical decision-making process is superior to the single-stage process in the entry mode choice.

Additional support for the sequential logit model is provided by the Hausman test, which rejects the IIA assumption. Once the best-fitting model has been identified, we proceed to analyze the results presented in Table 5.

Table 4

Results of the Multinomial Logit Model (Model 1)

Independent Variables	Simultaneous Single-Stage (3 Options) Structure		
	Eq. (1): Indirect Export vs. Non-Export	Eq. (2): Direct Export vs. Non-Export	Eq. (3): Direct Export vs. Indirect Export
Differentiation	0,036* (0,020)	0,044** (0,020)	0,007 (0,008)
Human capital	-0,982 (1,102)	0,881 (0,966)	1,863* (1,033)
Size	0,895** (0,354)	1,502*** (0,347)	0,607** (0,241)
Age	0,089 (0,269)	-0,062 (0,257)	-0,152 (0,229)
Foreign investors	1,094 (0,929)	1,029 (0,926)	-0,065 (0,644)
Internet	0,267 (0,552)	1,360** (0,571)	1,093** (0,542)
Constant	-1,864* (0,938)	-2,898*** (0,956)	-1,033 (0,868)

Note. Standard errors in parentheses. *** Significant at the 1 % level, ** at the 5 % level, * at the 10 % level. Number of observations = 177

Table 5

Results of the Sequential Logit Model (Model 2)

Independent Variables	Two-Stage Structure			
	Eq. (1): Direct & Indirect Export vs. Non-Export		Eq. (2): Direct Export vs. Indirect Export	
Differentiation	0,041**	(0,020)	0,009	(0,008)
Human capital	0,082	(0,868)	2,616**	(1,107)
Size	1,248***	(0,323)	0,642***	(0,245)
Age	0,007	(0,236)	-0,246	(0,243)
Foreign investors	1,029	(0,869)	0,079	(0,682)
Internet	0,837*	(0,491)	1,376**	(0,569)
Constant	-1,661**	(0,839)	-1,222	(0,910)

Note. Standard errors in parentheses. *** Significant at the 1 % level, ** at the 5 % level, * at the 10 % level. Number of observations = 177

5. RESULTS AND DISCUSSION

As shown in Eq. (1) in Table 5, the export decision is not independent of the firm's product differentiation strategy. Our results indicate that wineries marketing differentiated (high-priced) wines tend to export more than their counterparts marketing lower quality products ($\beta = 0{,}041$; $p < 0{,}05$). However, the evidence does not support a positive relationship between higher levels of product differentiation and direct export (Eq. [2] in Table 5). Contrary to our initial expectations, we found no evidence that firms employing more highly educated workers are more likely to export. One possible explanation lies in the many export assistance programs offered by public sector institutions (most notably, the Spanish Institute of Foreign Trade (ICEX) and the Spain Chamber of Commerce), which support domestic firms in their export activities.

With regard to channel decision, the data in Eq. (2) in Table 5 reveal a significant positive relationship between human capital and direct exports for the wineries in our DOCa Rioja sample. This is in line with previous research indicating that the skills of highly educated employees, such as speaking foreign languages (Knowles et al., 2006) or understanding new technologies (Bojnec & Ferto, 2010), make it easier for the firm to establish its own export channel. The coefficients of firm size are positive and significant at the 1 % level in Eqs. (1) and (2) of Table 5. These results are consistent with previous findings, confirming that larger firms are more likely to engage in direct exporting (Rialp et al., 2002). This suggests that exporting, particularly through direct mode, requires a high level of investment.

The data in Eqs. (1) and (2) in Table 5 show that firm age does not have a significant effect. This aligns with the generally inconclusive results reported in the literature (Fryges, 2006; Majocchi et al., 2005; Moen & Servais, 2002).

It was postulated that firms receiving foreign investment would make significantly greater use of direct exporting; however, our data do not support this (β was not significant in either equation in Table 5). A possible explanation is the limited level of foreign participation in DOCa Rioja wineries. We acknowledge that this explanation is somewhat speculative and encourage future researchers to further examine the impact of foreign investment on the exporting activity of wineries.

We find some support for the belief that the internet positively influences export decisions. Our findings also indicate that wineries with their own websites are more likely to engage in direct exporting.

6. CONCLUSIONS, LIMITATIONS, AND FUTURE RESEARCH LINES

This section outlines the theoretical or practical contributions of the study (depending on the focus, not all studies provide both). The narrative emphasizes how the results relate to the existing literature and their relevance to the field, either supporting or challenging previous findings. The section concludes by addressing the research questions or objectives established. It is crucial to recognize and discuss the limitations of the study. This research assumes that export decisions are sequential and non-independent, which justifies decomposing the choice of export channel into a two-stage process: first, deciding whether or not to export, and second, selecting between direct and indirect modes. This hierarchical decision-making process is considered superior to single-stage processes in complex situations such as export decisions. The rationale is that human analytical capacities are limited, which leads decision makers to simplify the process by sequentially eliminating alternatives that fail to meet key criteria. This phenomenon was analyzed using a sample of 177 DOCa Rioja wineries. The methodology employed was based on a sequential logit model, which overcomes the independence of irrelevant alternatives property of the multinomial logit model.

The following conclusions can be drawn from the empirical analysis. The modeling reveals the sequential and non-independent character of the export decision and the choice of export channel, showing the multi-stage nature of the decision-making process. The structure which best represents the export decision sequence involves a first stage of deciding whether or not to export, followed by a second stage in which firms choose between indirect and direct export modes. Given their interdependence, the choice of export channel should be modeled jointly with the export decision. The paper also highlights some limitations which point to interesting avenues for future research. First, from a methodological standpoint, sequential logit models are more sensitive than many other alternatives to potential bias arising from unobserved heterogeneity (Cameron & Heckman, 1998). Nevertheless, the theoretical rationale developed while formulating the hypotheses supports the use of this methodology.

Although our study focused on the simple dichotomy between direct and indirect exporting, we acknowledge that there is a wide array of indirect export channels, such as export promotion organizations or trade representatives (Albaum et al., 2002). Although they share some features, they exhibit many distinct strengths and weaknesses that may affect the decision-making process. However, we do not consider specific export channels, because this could affect our ability to assess the impact of factors specific to each export mode.

Despite the limitations mentioned in the previous paragraphs, the findings of this research have important implications for export researchers, managers, and public policymakers. The methodology employed and the results obtained provide a clearer understanding of what affects the choice of export entry mode and the level at which they operate. In particular, this approach help avoid the mistake of disregarding key factors that may not have a significant impact on the decision of whether or not to export or on the choice of export channel. For example, this paper shows that human capital does not influence the first stage of the decision-making process but does exert substantial influence on the choice of export channel in the second stage.

Overall, this study employed a methodology that can be critical for obtaining a better understanding of DOCa Rioja wineries' export channel decisions. It may assist various stakeholders in exploring these firms' potential growth into multinational corporations. This outcome is particularly relevant for sectors such as the Spanish wine industry, where the domestic market is saturated.

STATEMENTS

Data Availability

The author declares that no new data were created or analyzed in this study. Data sharing is not applicable to this article.

Use of Artificial Intelligence

No generative AI tools were used for content creation or analysis.

Conflict of Interests

The authors declare no conflicts of interest.

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Author Contributions (CRediT)

MFO: conceptualization, methodology, formal analysis, writing, original draft, review & editing, project administration.

Ethical Approval

Not applicable.

Declaration of Originality

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THE ROLE OF CFOS ON THE BOARDS OF MALTESE LISTED ENTITIES: IMPLICATIONS FOR CORPORATE GOVERNANCE

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Abstract

Aim: This paper examines the role of Chief Financial Officers (CFOs) on the boards of Maltese Listed Entities (MLEs). The paper explores how the corporate boards of MLEs prefer to involve CFOs and evaluates the views of board members about the benefits and drawbacks of CFO participation. The study analyzes the broader implications for corporate governance, including the perspectives of directors, managers, and shareholders. **Methodology:** We adopted a mixed-method approach using semi-structured interviews with 10 board members (BMs) and 16 CFOs from MLEs. In addition, we collected written responses from three BMs and two CFOs, resulting in a total of 31 participants. **Results:** MLEs tend to favor CFOs as regular board attendees rather than full board members, aiming to ensure robust financial oversight while preserving the independence of managerial oversight. Factors such as the financial literacy of the board and the complexity of the business influence this preference. Boards sometimes appoint CFOs following cooling-off periods, and participants expressed concerns about potential conflicts between current and former CFOs, as well as the challenge of balancing board duties with operational responsibilities. Nevertheless, participants viewed CFO board participation positively. Participants believe CFOs contribute to strategic alignment, deeper managerial insight, and enhanced shareholder confidence when they participate on boards. While small shareholders expressed minimal concern, institutional investors placed a stronger value on CFO involvement. **Originality / value:** This study fills a gap in the corporate governance literature by examining the specific contributions and oversight roles of CFOs within the boards of Multinational Listed Entities (MLEs), an area that has received limited academic attention. **Practical implications:** The findings guide MLEs and other listed firms in designing CFO involvement in board processes and balancing effective financial oversight with good governance practices. **Theoretical implications:** This study contributes to corporate governance theory by illustrating how CFOs play a distinctive role in board structures, particularly in contexts where companies must balance financial expertise with administrative independence. It deepens understanding of how CFO involvement shapes decision-making dynamics, strategic oversight, and the evolution of governance models in smaller capital markets.

Keywords: chief financial officer, board of directors, Maltese listed entities; corporate governance
JEL: G34, M41, G30.

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EL PAPEL DE LOS GERENTES FINANCIEROS EN LOS DIRECTORIOS DE LAS ENTIDADES MALTESAS COTIZADAS: IMPLICACIONES PARA EL GOBIERNO CORPORATIVO

Resumen

Objetivo: examinar el papel de los gerentes financieros (CFO por sus siglas en inglés) en los directorios de las entidades cotizadas en Malta (MLE por sus siglas en inglés). Explora cómo estas entidades prefieren involucrar a sus CFO, evalúa los beneficios y desventajas percibidos de su participación y analiza las implicaciones más amplias para la gobernanza corporativa, considerando las perspectivas de directores, gerentes y accionistas. **Metodología:** se adoptó un enfoque metodológico mixto, que incluyó entrevistas semiestructuradas con 10 miembros de directorios (BM)por sus siglas en inglés y 16 CFO de MLE. Además, se recopilaron respuestas escritas de tres BM y dos CFO, alcanzando un total de 31 participantes. **Resultados:** las MLE tienden a preferir que los CFO participen regularmente en las reuniones del directorio sin ser miembros plenos, con el fin de garantizar una supervisión financiera sólida sin comprometer la evaluación independiente de la gestión. Esta preferencia está influenciada por factores como el nivel de alfabetización financiera del directorio y la complejidad de la empresa. Aunque en algunos casos se permitió la incorporación de CFO al consejo tras períodos de enfriamiento (*cooling-off*), surgieron preocupaciones respecto a posibles conflictos entre CFO actuales y anteriores, así como sobre la dificultad de equilibrar las responsabilidades diarias con los compromisos del directorio. A pesar de ello, la participación de los CFO fue vista de manera positiva, al aportar alineación estratégica, conocimiento gerencial y mayor confianza por parte de los accionistas. Mientras que los pequeños accionistas mostraron escaso interés, los inversores institucionales valoraron significativamente su presencia. **Originalidad / valor:** este estudio contribuye a la literatura sobre gobernanza corporativa al abordar el papel específico de los CFOs en los consejos de administración de las MLEs, un aspecto que ha sido poco explorado en la investigación académica. **Implicaciones prácticas:** los hallazgos ofrecen orientaciones útiles para las MLEs y otras empresas cotizadas en cuanto a cómo estructurar la participación de los CFOs en los procesos del consejo, logrando un equilibrio entre supervisión financiera eficaz y buenas prácticas de gobernanza. **Implicaciones teóricas:** este estudio enriquece la comprensión teórica de la gobernanza corporativa al destacar el rol distintivo de los CFOs dentro de la estructura del consejo, especialmente en contextos donde se requiere equilibrar la experiencia financiera con la independencia. Profundiza en cómo la participación del CFO influye en la dinámica de toma de decisiones, en la supervisión estratégica y en la evolución de modelos de gobernanza en mercados de capital más pequeños.

Palabras clave: director financiero, directorio, entidades cotizadas maltesas, gobierno corporativo

1. INTRODUCTION

A listed entity in Malta is defined as one whose financial instruments are traded on a recognized trading venue (Malta Stock Exchange, n.d.). These venues include the Official List, the Alternative Companies List, and the Institutional Financial Securities Markets List, each governed by distinct listing requirements (Malta Financial Services Authority, 2022; Malta Stock Exchange, n.d.). The present study focuses on entities listed on the Official List, which includes both equity-listed and bond-listed companies. Corporate governance regulations in Malta require such listed entities to be led by an effective board of directors, and boards are encouraged to include non-executive directors to ensure independent oversight and fair decision-making. Within this governance framework, the inclusion of Chief Financial Officers (CFOs) on boards has become an area of growing interest and debate.

Internationally, CFOs have been seen as both strategic contributors and key advisors to boards, particularly in areas involving financial oversight and risk management. Nevertheless, structural and regulatory reforms in governance practices have prompted many organizations to reevaluate the appropriate role of CFOs, considering whether they should be full board members, regular attendees, or retain a strictly executive function separate from board deliberations. Although research has explored the evolving functions of CFOs and the composition of boards in various contexts, limited attention has been given to the specific role CFOs play within boards in smaller capital markets such as Malta. To date, little is known about how Maltese Listed Entities (MLEs) involve their CFOs in board processes and what implications this has for governance effectiveness. This lack of focused research represents a clear gap in the corporate governance literature. This study seeks to address that gap by investigating how MLEs prefer to engage their CFOs in board activities, evaluating both the advantages and disadvantages of these practices from the perspectives of CFOs and other board members. It also examines the broader corporate governance implications of CFO involvement for directors, managers, and other stakeholders, including shareholders.

The objectives of this paper are threefold: (1) to examine the preferred modalities through which Maltese Listed Entities (MLEs) involve Chief Financial Officers (CFOs) in board activities, whether as full board members, regular participants, occasional invitees, or not at all; (2) to assess the perceived benefits and drawbacks of these various forms of involvement from the perspectives of both CFOs and board members; and (3) to explore the broader corporate governance implications of CFO presence on boards, particularly in terms of its influence on decision-making processes and alignment among key stakeholders. This study is limited to board-related responsibilities of CFOs and considers relevant developments in Malta and abroad up to March 2024. It adopts a mixed-methods approach combining qualitative interviews and quantitative survey responses to ensure both depth of insight and measurable comparisons. By linking methodological choices to the research aims, this study offers robust insights into how CFOs can effectively contribute to board governance while maintaining a balance between financial expertise and independent oversight.

2. LITERATURE REVIEW

2.1 Theoretical Framework

The theoretical framework of this study is grounded in stewardship theory and agency theory, two contrasting paradigms within the domain of corporate governance. Agency theory, which originated from economic and social developments, has evolved to better address various realms of entrepreneurship and modern business phenomena (Bendickson et al., 2016). This theory assumes that managers may act in their own self-interest, which can lead to conflicts of interest with shareholders and other stakeholders, especially when board independence is compromised. Stewardship theory, in contrast, provides an alternative perspective by proposing that managers and organizational leaders are intrinsically motivated to act in the best interests of the organization and its stakeholders (Davis et al., 1997). Rather than prioritizing personal gain, stewards are driven by principles of trust, accountability, and commitment to collective goals. This theory emphasizes pro-organizational behavior, long-term value creation, and collaborative decision-making.

This study examines CFO board participation and shows how their involvement may promote stewardship, accountability, enhanced decision-making, and the alignment of stakeholder interests. On the one hand, stewardship theory suggests that CFOs act as stewards, prioritizing the collective interests of the board, shareholders, and the organization. Agency theory, conversely, highlights concerns that CFOs may pursue personal objectives, potentially resulting in conflicts of interest and reduced board independence. To investigate these theoretical claims, this study employs a mixed-methods research design, integrating qualitative and quantitative data to provide a comprehensive understanding of CFO participation on the boards of Malta's listed entities (MLEs). This approach is especially suitable because it enables a detailed exploration of both subjective perceptions and measurable patterns. The qualitative component, which consists of semi-structured interviews, offers in-depth insights into the experiences of board members and CFOs. Meanwhile, the quantitative component, based on Likert-scale responses, facilitates statistical comparison and trend analysis. By integrating these complementary methods, the study provides valuable insights into the changing role of CFOs in board governance and the trade-offs between stewardship and agency perspectives. This methodological choice is consistent with earlier research in corporate governance, where scholars have effectively utilized mixed-methods strategies to capture both contextual depth and empirical data (Johnson et al., 2007; Saunders et al., 2015).

2.2 CFO Participation on Listed Entity Boards and the Rationale

The role of CFOs in corporate governance (CG) and their participation in board meetings sparks ongoing debate. Some critics consider CFOs as passive participants who mainly operate under supervision, rather than actively contributing (Copnell, 2019). Many express concerns that CFOs might form inappropriate financial or social ties with board members (BMs), potentially compromising governance (Langevoort, 2006). However, Copnell (2019) argues that these connections enhance effective communication between management and boards.

The level of CFO involvement in board meetings is influenced by several factors, including the size of the entity, the CFO's ownership stakes, their age, and their financial expertise (Hualun & Tao, 2006)., Boards lacking in financial expertise particularly need CFOs, especially in matters related to financial policy (Khan & Mauldin, 2021; Mobbs, 2018). However, as boards increasingly require expertise in areas like cybersecurity and Environmental, Social, and Governance (ESG) issues, the opportunities for CFOs to participate have decreased (SpencerStuart, 2024; Trentmann, 2022).

Board independence also plays a crucial role in corporate governance. Increased demands for independent boards have resulted in a decline in CFO representation (Gould, 2014; Murphy, 2012). SpencerStuart (2024) notes that a growing number of S&P 500 companies are now appointing independent financial executives instead of CFOs. Low (2017) argues that having a CFO on the board can undermine board independence and the effectiveness of the audit committee. He suggests an alternative approach where CFOs participate in board meetings as non-board members.

A notable trend is the increasing number of near-retirement CFOs joining corporate boards. This shift allows them to contribute to corporate governance while staying professionally engaged, often taking on multiple board roles (SpencerStuart, 2024). As outside directors, particularly on audit committees, they enhance learning opportunities and provide valuable benefits to their organizations (EY, 2012, as cited in Khan & Mauldin, 2021). The role of the CFO has evolved significantly, now encompassing strategy setting, risk management, sustainability, and even potential succession to CEO positions (Connell, 2021; Konstans, 2013).

2.3 The Pros and Cons of CFO Board Participation

CFOs are dedicating more time to board meetings, which enhances financial oversight and contributes to strategic decision-making (Cunningham, 2006; Higgins & Gulati, 2006; Lees, 2014; Zorn, 2004). This increased engagement often results in their appointment as BMs, allowing them to strengthen financial controls and reduce CEO dominance in financial decision-making (Low, 2017; Mobbs, 2018). Additionally, CFO membership on the board leads to improved monitoring, stronger internal controls, and decreased audit risks (Liu, 2017).

The Canadian Institute of Chartered Accountants emphasizes the significant role of CFO participation in listed entities (Lindsay, 2015). CFOs bring essential financial expertise to the table, which is crucial for strategic planning (Copnell, 2019; Uhde et al., 2016). Their comprehensive understanding of company operations helps in evaluating strategic initiatives effectively (Lindsay, 2015). Furthermore, their exposure to various industries increases their adaptability to market shifts (Hagel, 2013; Trentmann, 2022). Acting as trusted advisors, CFOs are positioned to challenge existing norms by providing data-driven insights that can influence decision-making processes (Dennis, 2023).

One of the key responsibilities of a CFO is to actively manage financial risks, which ensures resilience in strategic discussions (Uhde et al., 2016). By communicating effectively and providing timely risk reports, CFOs significantly enhance their contribution to board deliberations (International Federation of Accountants, 2009; Lees, 2014). Furthermore, CFOs take an active role in performance management by recognizing achievements and constructively addressing underperformance (Buttigieg, 2013).

CFO board membership plays a crucial role in ensuring the timely reporting of adverse financial news and aligns BM objectives with board goals (Muttakin et al., 2019). Their financial expertise helps boards interpret data accurately, thereby reinforcing governance frameworks (Favaro, 2001; Indjejikian & Matějka, 2009; Mbatha, 2017; Meyer-Doyle, 2017; Zorn, 2004). However, CFOs may become entrenched, using their insider knowledge to avoid dismissal, which poses governance risks (Muttakin et al., 2019). Moreover, Duong et al. (2020) argue that CFO board membership can negatively impact company performance and earnings quality, aligning with agency theory.

In Malta, CFOs are expected to actively participate in board meetings, dedicating a significant amount of time to this responsibility (Buttigieg, 2013). When appointed to the board, CFOs take on fiduciary duties similar to those of other directors, which include ethical and legal obligations under Maltese law (Deloitte, 2014).

The relationship between the CFO and CEO is an important aspect to consider. CFOs often provide a counterbalance to the CEO's optimism with their financial skepticism (Sher, 2013). Both the CFO and CEO will benefit from attending board meetings to maintain this equilibrium (Gould, 2014). However, strong social ties among CFOs, CEOs, and BMs may weaken governance by reducing the effectiveness of oversight (Krishnan et al., 2011). Research shows that these relationships can undermine CG even when formal independence is upheld (Fracassi & Tate, 2012; Hwang & Kim, 2009; Schmidt, 2009; Westphal, 1999).

CFOs who serve as outside directors can bring valuable knowledge back to their organizations, which can enhance governance practices (Khan & Mauldin, 2021). However, agency theory highlights potential conflicts of interest, as these external director roles may distract CFOs from their primary responsibilities and provide them with personal benefits, such as higher compensation (Boivie et al., 2016; Perry & Peyer, 2005). This raises concerns that CFOs might prioritize their personal gains over the interests of their entities.

In summary, CFO participation on boards improves financial oversight, risk management, and strategic planning. However, potential conflicts of interest, risks of entrenchment, and governance challenges require careful oversight to ensure that CFO contributions align with the effectiveness of the board.

2.4 Wider Corporate Governance Implications on Directors, Managers, and Shareholders

The International Federation of Accountants (2020) emphasizes the crucial role of CFOs in advancing ethical financial management, ensuring transparent reporting, and enhancing resource efficiency. By combining technical, ethical, and business expertise, they support the development of sustainable business models. CFOs collaborate with boards, auditors, CEOs, and audit committees to ensure accurate financial reporting (De Lange-Snijders et al., 2023). When CFOs are on boards, they gain voting power on important company matters (Mobbs, 2011). This position comes with legal obligations to prioritize the interests of the company and its shareholders (Gould, 2014). Their presence strengthens shareholder protection and long-term value creation (Higgins & Gulati, 2006; Zorn, 2004). Furthermore, CFOs facilitate communication between management and boards, ensuring that management gives due attention to concerns (Kim et al., 2010).

CFOs actively oversee internal control environments and implement robust financial processes that drive company success (Sfeir, 2019). In a dynamic business landscape, they balance corporate culture, strategic objectives, and financial controls (Buttigieg, 2013; Mbatha, 2017). With their broad industry exposure, they challenge conventional practices and introduce innovative governance measures (Copnell, 2019). Additionally, CFOs establish proactive controls to mitigate fraud risks, which strengthens CG. As members of the board, CFOs enhance the quality of financial reporting and promote conservative accounting practices that benefit shareholders and investors (Muttakin et al., 2019). They also provide crucial investment guidance to senior management and governing bodies (International Federation of Accountants, 2020). Moreover, CFO participation expands their operational understanding across various business functions (International Federation of Accountants, 2020).

Investor sentiment often favors companies that have CFOs on their boards. Concerns typically arise when CFOs leave these roles (Mobbs, 2018). Investors value financial expertise on boards as it enhances oversight (Cunningham, 2024). However, if CFOs hold too many external directorships, it can raise concerns about their divided attention, leading to potential pushback from investors (Raval, 2023). Some drawbacks of excessive directorships include time constraints, conflicts of interest, and scheduling issues; nonetheless, having external CFO directorships can improve strategic investments and long-term performance (Khan & Mauldin, 2021).

While independent boards improve oversight, having a CFO on the board may lessen the scrutiny of their performance. Regulators and shareholders typically prefer outside directors for their objectivity (Kim et al., 2010). Therefore, if a CFO is part of the board, it is important to include at least one additional director with financial expertise to evaluate the CFO's contributions (Kim et al., 2010).

In summary, CFOs play a significant role in CG by effectively balancing financial oversight with the interests of shareholders and the imperative for strategic growth. To ensure the efficacy of governance structures, it is crucial to implement safeguards that mitigate the risk of power consolidation within executive ranks (Fama & Jensen, 1983; Lyon & Lawson, 2012). It is imperative that boards and management collaborate to foster dynamic and accountable governance frameworks.

3. RESEARCH METHODOLOGY

3.1 Research Design

This research utilizes a primarily qualitative mixed-methods approach, combining both quantitative and qualitative approaches to leverage their strengths and mitigate their limitations (Saunders et al., 2015). This methodology provides a thorough and comprehensive understanding of the research problem by combining numerical data analysis with qualitative insights into participants' perspectives, thereby clarifying the quantitative results where applicable (Johnson et al., 2007).

3.2 Research Tool Development

Semi-structured interviews, which incorporate both closed and open-ended questions, were deemed the most effective research approach due to their flexibility in collecting reliable data that aligns with the study's objectives (Saunders et al., 2015). The structured design of the interviews ensures consistency and systematic inquiry, facilitating the collection of comparable and statistically analyzable data (McIntosh & Morse, 2015). Open-ended questions allow participants to express their viewpoints, while probes and follow-up prompts enhance the clarity of their responses (Wahyuni, 2012). In addition, the research employs closed-ended questions utilizing a five-point Likert scale, ranging from "strongly disagree" or "not important at all" to "strongly agree" or "very important," thereby enabling robust quantitative analysis of participant responses.

The interview schedule for this study was specifically developed for current BMs and CFOs of MLEs. It was designed to directly align with the three research objectives, ensuring that important aspects of CFO board participation were thoroughly examined. The protocol was structured into an introductory section that gathered information about the respondents, followed by three main sections, each focusing on a key aspect of board participation.

To achieve the *first* objective, the initial section following the introduction included a closed-ended question that required respondents to rate the importance they attributed to various participation options. This was subsequently followed by four open-ended questions designed to explore the rationale and context of such participation.

Addressing the *second* objective, the subsequent section featured two closed-ended questions: one outlined potential advantages of regular CFO board participation, while the other outlined possible disadvantages. Respondents evaluated each option and provided additional insights through an open-ended question that invited them to identify any further advantages or disadvantages of this participation.

For the *third* objective, the final section contained four open-ended questions aimed at examining the broader CG implications of different types of CFO board participation. These questions focused on the needs, reactions, monitoring behaviors, and perceptions of directors, managers, and shareholders regarding the influence of the CFO board stemming from such participation. The interviews concluded with a general open-ended question inviting any additional comments. Additionally, two final sections provided definitions of key terms and an explanation of the five-point Likert Scale used for the closed-ended questions.

3.3 The Sample Population

To collect data, the researchers retrieved a list of Multinational Listed Entities (MLEs) from the Malta Stock Exchange website (Malta Stock Exchange, n.d.). They systematically reviewed each entity's website to identify board members (BMs) and CFOs, with additional details sourced from the Malta Business Registry (n.d.). Initial contact was made via email or LinkedIn to obtain the relevant email addresses of potential participants. Each individual received an introductory email that included a Letter of Introduction and an invitation to participate in the study, ensuring transparency and allowing for verification. The researchers followed up with non-respondents after one or two weeks. A total of 26 respondents participated in interviews, and an additional five other individuals provided responses via email. Consequently, the final dataset included 13 BMs and 18 CFOs, encompassing 27 MLEs. While some interviewees initially did not respond, they were subsequently recontacted for targeted interviews, resulting in qualitative saturation by the conclusion of the process. The study comprised directors, company secretaries, CFOs, and CEOs, all of whom had experience in CFO board participation. The average board size among the respondents' entities was approximately eight members, with minimal variability across different entities. Notably, about half of the BMs(four) were independent non-executive directors (INEDs), three were NEDs, and one was an executive director.

3.4 Data Collection

Data collection, as outlined by Saunders et al. (2015), entails gathering information tailored to meet the research objectives. This study utilizes both secondary and primary sources for data collection.

3.4.1 Secondary Data Collection

Secondary data was gathered from various sources to aid in the development of the interview schedule. A pilot interview was conducted with one BM and one CFO to evaluate the validity and reliability of the research instrument. Based on the feedback received from the pilot interview, the interview questions were revised accordingly.

3.4.2 Primary Data Collection

Participants were allowed to select the timing and location of their interviews, which took place between November 1 and December 22, 2023. Depending on individual preferences, the researchers conducted interviews electronically via Microsoft Teams or Zoom, or in-person at the participants' workplaces, with the majority choosing in-person meetings. To ensure their participants were prepared, all interview questions were distributed one to two weeks in advance, either as hard copies or via email. Before the interviews commenced, participants signed an interviewee consent form, either physically during in-person sessions or electronically for virtual meetings. Most respondents consented to have the interviews recorded to assist in data analysis, while detailed notes were taken for those who opted out of recording.

The researchers employed a purposive sampling strategy to select participants, ensuring representation across various MLE sectors and governance structures. They chose CFOs and board members based on their active involvement in corporate governance matters, thereby capturing a range of diverse perspectives. The team conducted data collection through a blend of in-person and online interviews, which facilitated flexibility and enhanced participant engagement. They transcribed qualitative data from interviews verbatim, and carried out thematic coding to uncover recurring patterns and insights. For the quantitative data derived from Likert-scale responses, the researchers analyzed it using IBM SPSS Statistics, employing non-parametric tests such as the Mann-Whitney and Kruskal-Wallis tests to identify significant variations among participant groups. These methodological choices ensure the reliability and generalizability of the study's findings within the context of MLE governance.

3.4.3 Addressing Variability and Bias

A limitation of semi-structured interviews was their flexibility, which resulted in variations in the depth and scope of participants' responses. To address this issue, a single interviewer conducted all interviews and used follow-up questions to ensure consistency. Additionally, the open-ended questions posed a risk of researcher bias and differing interpretations. To mitigate this risk, the first two co-authors engaged in detailed discussions to reach a consensus on how to interpret the responses, thereby enhancing the rigor and consistency of the analysis.

3.5 Data Analysis

To enhance data analysis, we transcribed audio-recorded interviews, producing detailed transcripts and essential notes from the sessions. We analyzed closed-ended questions using IBM SPSS Statistics for quantitative data analysis. The Mann-Whitney test compared mean rating scores between two groups of participants BMs and CFOs), while the Kruskal-Wallis test assessed mean scores in relation to board size and the types of CFO participation. Our results revealed significant or marginally significant findings. For qualitative data, we organized responses from open-ended questions and additional comments into a spreadsheet for thematic analysis, which allowed us to identify and structure emerging themes (Wahyuni, 2012).

3.6 Other Limitations of the Study

This study, despite thorough efforts to conduct a comprehensive and methodologically sound investigation, has several limitations. First, participants' responses are inherently subjective, especially in qualitative comments, which may affect how certain findings are interpreted. Second, inconsistencies were observed between responses to open-ended questions and the ratings given on the closed Likert-scale items. At times, the justifications for these ratings lacked coherence. Third, two of the five respondents who opted to provide feedback via email instead of participating in interviews submitted responses that were difficult to interpret due to a lack of contextual cues or elaboration. Lastly, some participants left questions unanswered, which limited opportunities for clarification and may have reduced the depth of insight in specific areas.

4. FINDINGS AND DISCUSSION

4.1 CFO Board Participation and its Type

4.1.1 The Most Commonly Preferred Type of Participation: CFO Regular Participation but Non-Board Membership

In the first question of the survey, respondents rated the importance of four types of CFO participation in board meetings within Maltese Listed Entities (MLEs). As indicated in Table 1, the mean ratings across these participation types exhibit relatively small differences ($p > 0.05$), indicating no statistically significant preference overall. Nevertheless, one option emerged as notably significant: respondents rated the CFO's regular participation in board meetings, without holding formal board membership as highly important ($M = 4.45$, $SD = 1.06$).

Participants emphasized that this arrangement strikes an effective balance between financial insight and governance integrity. This approach allows the board to leverage the CFO's expertise on financial matters while maintaining independence, including the flexibility to exclude the CFO from sensitive discussions when necessary.

Table 1

The Importance of Different Types of CFO Board Participation

Participation Type	Mean	Standard Deviation
Regular participant but not a board member	4.45	1.06
Board member	2.87	1.41
Specially invited but not a board member	2.58	1.31
Not invited	1	0

Note. Ratings were based on a 5-point Likert scale from 1 (Not important at all) to 5 (Very important).
$N = 31$ respondents.

The option of the CFO serving as a board member received a neutral average rating ($M = 2.87$), reflecting the lack of consensus among respondents. Some participants argued that an experienced CFO could positively influence board decision-making, particularly in terms of financial performance, regulatory compliance, and IFRS updates. However, others expressed concern that this arrangement might increase the risk of conflicts of interest. They also noted that including the CFO as a formal board member could limit opportunities to appoint other executive directors whose expertise might be more relevant to broader strategic or operational matters.

Another option that received a neutral average rating (*M* = 2.58) was having the CFO specially invited to attend board meetings without holding formal membership. While respondents viewed this arrangement as more appropriate than excluding the CFO entirely, they generally considered it less valuable than regular participation, as it could limit the consistency and depth of financial input provided to the board. Finally, respondents deemed the option of not inviting the CFO as unimportant ($\bar{x}$ = 1.00), with many highlighting the necessity for at least minimal interaction between the CFO and the board, especially when BMs lack financial expertise.

The preferred role for a CFO on an MLE board is one of regular participation without serving as a BM, which aligns with the majority of existing literature. This approach emphasizes that the board can more effectively consider financial implications while retaining the independence necessary to challenge management when necessary, including the ability to request the CFO to leave meetings. Consistent with findings from Mobbs (2018), Trentmann (2022), and SpencerStuart (2024), participants indicated that this arrangement mitigates potential conflicts of interest between CFOs and board members and enables other executive directors to occupy a board seat.

These findings support previous studies that assert CFO participation enhances board oversight while preserving independence (Mobbs, 2018; Trentmann, 2022). However, the preference for CFOs as non-members contradicts some research advocating for their inclusion as full board members to enhance financial decision-making (Uhde et al., 2016). This contrast underscores a contextual distinction in MLE governance, where financial oversight takes precedence over board integration.

4.1.2 The Key Skills and Attributes of a CFO that Support Their Role as a Regular Contributor, Without Holding Formal Board Membership

Respondents identified key personal attributes necessary for CFOs to participate regularly in board meetings. A majority (22 out of 31) agreed that CFOs must be dynamic problem-solvers capable of strategic thinking that extends beyond financial matters and should possess a strong understanding of the entity's market and overall business context. Additionally, a significant number of respondents (18 out of 31) emphasized the importance of financial expertise and relevant professional qualifications. Approximately half of the participants (16 out of 31) also highlighted the value of communication and public speaking skills, echoing the perspectives of Copnell (2019) and the International Federation of Accountants (International Federation of Accountants, 2009).

Some respondents (12 out of 31) emphasized that CFOs should stay current with regulatory developments, especially those related to capital markets, and should have relevant professional experience. Several participants also highlighted the significance of personal qualities such as humility, accountability, and a strong professional reputation. Additionally, most respondents (24 out of 31) stressed the importance of strong presentation skills and the ability to simplify complex financial information, aligning with findings by Lees (2014). Other key attributes mentioned included integrity, transparency, the ability to remain calm under pressure, as well as teamwork and assertiveness.

Furthermore, leadership, negotiation skills, and the ability to address Environmental, Social, and Governance (ESG) issues were considered important. Lastly, several respondents pointed out that the effectiveness of the CFO's role is significantly influenced by contextual factors, such as the CFO's shareholding status, the financial literacy of board members, and the size and complexity of the organization. Table 4.2 summarizes the various skills and characteristics that are deemed essential for the effective performance of the CFO role.

Table 2

Skills and Characteristics Required of a CFO to Participate in Board Meetings

Skill	Characteristic
Problem-solving	Integrity
Strategic thinking	Transparency
Market and business acumen	Humility
Financial expertise	Accountability
Social skills	Calmness and composure
Presentation	Persuasiveness and confidence
Regulatory knowledge	Preparation
Experience	Teamwork
Active listening	Assertiveness
Leadership	Adaptability
Negotiation	Quick-wittedness
Persuasion	—
Information confidentiality	—

In conclusion, a successful CFO needs a diverse skill set that goes beyond just financial expertise. This includes strategic thinking, strong leadership, and effective communication. Key qualities such as assertiveness, active listening, and the ability to simplify complex financial concepts for BMs help build trust and foster positive interactions. Additionally, having experience at the top level and staying updated on regulatory changes are crucial for effective participation in board activities. Attributes like confidence, integrity, and the ability to remain composed under pressure are vital for regular board participation. However, age is not a decisive factor in achieving success as a CFO on a board.

4.1.3 The Evolving Trends in CFO Board Membership

Respondents commented on a statement suggesting that CFOs increasingly decline to serve as directors in their own companies due to a growing emphasis on board independence. Nearly half of the respondents (14/31) agreed with this assertion, particularly in foreign-owned entities (10/14), where prioritizing director independence is evident. Two respondents (2/14) noted that the presence of a CFO might impede the board's ability to challenge management effectively, aligning with Low (2017). Additionally, one respondent (1/14) pointed out that simultaneously holding the roles of CFO and executive director (ED) could blur lines of responsibility.

In contrast, twelve respondents (12/31) disagreed with the statement. Three of these respondents (3/12) argued that CFOs possess valuable knowledge that enhances board effectiveness, while two others (2/12) contended that board membership ensures CFOs remain accountable. Another two respondents (2/12) remarked that independence can still be maintained through an appropriate mix of independent non-executive directors (INEDs) and EDs. A small group of respondents (5/31) expressed neutrality, asserting that CFO membership on the board poses no issue, provided the CFO participates in meetings as necessary.

4.1.4 The Impact of Ex-CFO Board Participation on the Participation of the Current CFO

Respondents also shared their views on whether current CFOs should serve on the board of another MLE, and whether ex-CFOs should sit on the boards of their own or other MLEs.

Most respondents (20/31) agreed that the current CFOs could serve on the board of another MLE, provided the two organizations were not competitors. However, a minority (11/31) disagreed, citing concerns about recurring time constraints and potential conflicts of interest.

Respondents overwhelmingly support ex-CFOs serving (29/31) on the board of their own companies or other MLEs, recognizing the valuable expertise they bring. This perspective aligns with findings from SpencerStuart (2017). However, some (14/29) recommended a cooling-off period before joining the board of their own MLE, to preserve their status as independent non-executive directors (INEDs).

When faced with the choice of appointing a current CFO or an ex-CFO to the board, most respondents (23/31) provided their insights. A majority (14/23) favored the ex-CFO for their experience, while 9 (9/23) preferred the current CFO for their up-to-date knowledge. Furthermore, 15 of these respondents (15/23) argued that allowing both to sit on the board simultaneously would be inappropriate, as it could create potential conflicts due to their differing perspectives.

4.1.5 Whether Board Participation of the CFO is Affected by the Presence of the CEO or Other Executives

Respondents were queried regarding whether CFO participation on boards varied with the presence of the CEO or the number of EDs. In examining the relationship between CFO board participation and CEO presence, the majority of respondents *(17/31)* disagreed, indicating that CFO participation remains independent of CEO presence. This finding contrasts notably with Low's (2017) conclusions.

Among those who disagreed, some respondents *(5/*17) noted that CFOs and CEOs typically collaborate closely both inside and outside the board, fostering relationships grounded in open communication and mutual respect. However, they also acknowledged that occasional character incompatibilities could hinder this collaboration. In contrast, the remaining respondents *(14/31)* expressed neutrality regarding the CEO's influence in this context. Within this group, some five respondents *(5/14*) mentioned that CFOs play a moderating role for over-ambitious CEOs, or that the dynamics of CFO participation alongside a CEO might depend on the extent of collaboration between the CFO and the CEO.

Interestingly, two respondents pointed out that when a CEO departs from an entity, a knowledgeable CFO may serve as a natural candidate for promotion to ensure continuity and stability. The CFO's deep understanding of the company's operations, strategic direction, and relationships with stakeholders positions them well to lead during such transitions, whether as acting or permanent CEO. This strategy mitigates disruptions, preserves strategic momentum, and corresponds with research from Konstans (2013), which highlights the benefits of promoting internal candidates.

In conclusion, fostering a strong CFO-CEO relationship is crucial for effective boardroom collaboration. Implementing internal succession strategies, such as promoting the CFO to CEO, not only ensures stability and continuity but also enhances entity leadership during periods of transition.

Regarding CFO participation in board activities in relation to the number of EDs, the majority of respondents (20/31) reported that CFO involvement remains consistent, as long as the board maintains a balanced mix of INEDs, NEDs, and EDs. This finding underscores the critical importance of board diversity and independence in supporting effective governance. The overall composition of the board, particularly the presence of independent voices, plays a pivotal role in ensuring robust oversight and strategic guidance. In such balanced governance structures, CFO involvement remains steady. However, a minority of respondents (11/31) noted that the CFO's relevance diminishes and may vary if there is an excess of EDs on the board.

4.2 Regular CFO Participation: An Evaluation of the Pros and Cons

Respondents then rated various pros and cons of regular CFO participation on the board, whether through board membership or otherwise.

4.2.1 Advantages

Opportunity to Clarify

The most frequently cited advantage (M = 4.94) is that CFOs actively participate in board meetings to explain the financial figures presented during the review and approval of strategic plans. Their involvement allows them to deliver clear and contextualized interpretations of the data, fostering a deeper understanding among directors. This perspective aligns with the views of Uhde et al. (2016) and Lindsay (2015). CFOs provide valuable justifications and assessments of the financial implications of strategic initiatives, enhancing the board's comprehension of financial components and promoting informed decision-making. Their presence ensures that questions about financial matters are addressed promptly, leading to more productive discussions and better outcomes.

Opportunity to Self-Improve

One slight positive advantage (M= 3.61) is that participation in boards, whether from their own entity or external, allows CFOs to gain essential knowledge to enhance current practices within their MLEs. About half of the respondents (18/31) believe that CFOs can obtain invaluable insights from this experience, fostering optimism about the potential benefits of this practice.

Easier Transmission of Information

A further potential advantage emerged, though it received mixed reactions *($\bar{x}$ = 3.45).* This possible advantage was that social ties between CFOs and BMs fostered by CFO board participation can enhance the flow of information to all BMs, as long as these relationships do not lead to excessive closeness. Approximately half the respondents *(16/31)* recognized that social ties could be beneficial, provided they do not compromise the CFO's professional distance from the BMs. Conversely, others *(15/31)* argued that maintaining a professional attitude *(7/15)* and strong communication skills *(8/15)* is sufficient. While they acknowledged that fostering social ties could be advantageous, they stressed the importance of exercising caution to preserve the objectivity and integrity of board meetings, thereby reassuring the audience about the board's meetings.

Even More Advantageous with CEO Participation

Respondents expressed a neutral stance *($\bar{x}$ = 3.13)* on the statement that CFO participation on the board is beneficial only when balanced by CEO involvement. Among the participants, some agreed *(15/31)* that an entity would struggle if the CFO served on the board without the CEO due to the CFO's lack of direct connection. Meanwhile, nine respondents remained neutral *(9/31)* and seven disagreed *(7/31)*. This finding aligns with Gould (2014).

Opportunity for More Oversight

Participants expressed neutral views *($\bar{x}$ = 2.97)* regarding the assertion that CFOs who serve on their boards as members, rather than merely as participants, are better positioned to exercise oversight. While 11 out of 31 participants agreed *(11/31)* with this statement, it did not enhance the understanding among BMs concerning the entity's operations. Conversely, another 11 respondents *(11/31)* disagreed, asserting that the CFO's primary function is to assist the board in oversight, a role that does not inherently require membership. Additionally, nine respondents *(9/31)* remained neutral, emphasizing that the effectiveness of the CFO's influence largely relies on the financial expertise of BMs and the oversight of the audit committee, thereby contrasting with Liu's (2017) findings. They contended that even regular participation by CFOs in board meetings, without formal membership, does not necessarily lead to improved oversight. Consequently, they concluded that the collective financial expertise of BMs and the effective functioning of the entity's audit committee are more critical factors for robust oversight.

Becoming More Dynamic and Market-Aware

Similarly, respondents expressed neutrality (*M* = 2.94) about whether regular CFO participation in board meetings enhances their dynamism and market awareness. The majority (22/31) argued that being "dynamic" does not depend on board participation. This suggests that simply attending board meetings might not support continuous learning for CFOs; instead, actively engaging in annual general meetings (AGMs) and executive committee meetings may better foster their professional development. However, a minority (9/31) disagreed, noting that regular board participation offers diverse prospects for CFOs.

Improved Financial Reporting

Responses indicated that regular participation of CFOs on boards generally improves the quality and impact of financial reporting. Overall, respondents remained neutral ($\bar{x}$ = 2.61) regarding this assertion. A majority of respondents (20/31) suggested that being a board participant enables CFOs to present their work more effectively. Conversely, the remaining respondents (11/31) contended that no significant correlation exists between CFO membership and the quality of financial reporting, contradicting the findings of Muttakin et al. (2019). Instead, it appears that the quality of financial reporting is more closely linked to the scrutiny and inquiries raised by BMs, irrespective of the CFO's involvement. Further research is warranted to investigate this area more thoroughly.

Other Advantages

Respondents identified several advantages of regular CFO participation without board membership. A subset of respondents (5/31) indicated that CFOs effectively communicate the entity's economic situation in "layman's terms," thereby assisting in helping strategically direct the organization, which aligns with the guidance from the International Federation of Accountants (2009). This clarity enhances the comprehension of the board members regarding the entity's financial standing, facilitating improved decision-making among the board members.

Furthermore, one respondent (1/31) pointed out that CFO participation encourages discussions about employee well-being. This engagement deepens BMs' understanding of staff issues and fosters a culture of employee-centric decision-making. It also emphasizes the multifaceted role of BMs as strategic leaders who recognize the connection between financial performance and organizational health. Additionally, the CFO's ability to forge strong connections with BMs is vital for conveying relevant information (1/31). This highlights the critical role of the CFOs in fostering meaningful interactions and ensuring effective communication of important information.

CFOs who regularly participate in board meetings derive several advantages, notably enhancing the board's "understanding of the entity's strategy" and enabling them to provide a comprehensive perspective (3/31). Through interactions with board members, CFOs can "expand their knowledge," allowing them to consider a broader range of factors in decision-making (4/31). CFOs become better positioned to understand the board's viewpoints as a result.

4.2.2 Disadvantages

Hindrance of Closer Ties

In rating the five identified disadvantages of CFO participation on boards, respondents most prominently indicated a concern (= 4.12) regarding the perception that social ties between CFOs and BMs might impede the effectiveness of CG. This concern stems from the possibility that these relationships could become overly familiar over time.

CFOs Who Are Too Influential

Furthermore, due in part to these social connections, respondents identified a significant disadvantage (M = 3.91): the regular presence of the CFO at board meetings, even without formal board membership, complicates the ability of BMs to discuss and critically evaluate the work conducted by the CFO and management. In this context, one BM (1/18) noted, "Over time it becomes more and more difficult to ask the CFO to leave the board meeting, although the BMs may have the legal right to do so."

Less Board Independence and Friction

Respondents marginally agreed that CFO board participation presents an additional disadvantage (M = 3.7). This involvement may undermine the independence of board members. As one ED added, "CFOs and financially literate EDs may easily encroach on each other's domains, leading to friction between them on financial strategies and resource allocation."

More Legal Obligations

Respondents' neutral stance (*M* = 3.4) regarding the statement that CFOs perceive board membership as more burdensome than regular board participation without membership, primarily due to the additional legal obligations associated with membership. Notably, a small number of CFOs (4/18) emphasized that, while in general CFOs are not afraid of any reasonably added responsibilities, they find both types of participation possibly burdensome.

Hindrance Towards More Board Diversity

Respondents rated the statement that CFO board membership or regular participation on boards may also hinder board diversity as neutral (*M* = 2.8). One board member (1/13) added, "Despite their attempt to limit the total number of BMs and participants to a reasonable size, yet, if willing enough, boards can also find their way to diversify."

A Further Disadvantage: Increased CFO Workload

Several CFOs *(3/18*) identified an additional disadvantage of regular board presentations or board membership (*3/18)*: the increased workload and time constraints imposed by the necessity for extensive preparation to present materials effectively to the board. This observation is consistent with findings noted earlier in the literature (Buttigieg, 2013).

4.2.3 The Pros of Regular CFO Board Participation Outweigh the Cons

When evaluating the pros and cons of CFO participation, it becomes clear that, despite some notable drawbacks associated with regular involvement, whether through board membership or otherwise, the advantages significantly outweigh the disadvantages. This advantage becomes even more pronounced when CFO participation occurs without full board membership, highlighting the critical value of the CFO role within MLE boards.

The findings demonstrate that CFO participation enhances strategic planning and governance while also introducing risks related to over-familiarity with board members. This observation aligns with existing research regarding the potential entrenchment of CFOs in decision-making roles (Muttakin et al., 2019). Furthermore, the trend favoring CFO participation without complete board membership reflects the insights of SpencerStuart's (2017) analysis of CFO practices among S&P 500 companies, emphasizing the growing importance of board independence.

4.3 The Broader CG Implications of the Different Types of CFO Board Presence

4.3.1 CFO Board Participation Helps Satisfy Director, Management, and Shareholder Needs

Respondents indicated that the participation of CFOs on boards significantly aids in addressing the needs of directors, managers, and shareholders.

They unanimously affirmed that CFO involvement plays a vital role in fulfilling directors' needs, particularly in areas such as strategy development, internal controls, budgeting, financial performance, and corporate culture. By offering expert financial guidance, CFOs enhance strategic decision-making processes, strengthen CG, and promote a culture of ethical behavior within the organization. The CFO's experience in setting realistic and achievable financial goals improves resource allocation and reinforces fiscal discipline.

Additionally, by ensuring financial stewardship and advocating for transparency, integrity, and accountability in financial matters, CFOs cultivate a sense of responsibility and ethical behavior across the organization. This support bolsters directors' efforts to maintain high standards of CG and aligns organizational practices with ethical and regulatory requirements.

The majority of respondents (29/31) noted that board participation helps to meet the needs of managers, particularly regarding strategic issues in collaboration with the CEO. The collaboration between CFOs and CEOs ensures the integration of financial considerations into broader strategic objectives, thereby facilitating more effective decision-making among managers. Furthermore, CFO participation on the board enhances managers' comprehension of the financial implications and risks tied to strategic initiatives, enabling them to make more informed decisions within their respective areas of responsibility. Notably, two respondents did not provide an answer to this part of the question.

Regarding shareholders, the majority of respondents *(28/31)* also agreed that the participation of CFOs enhances confidence in financial statements and reinforces the stability of dividend policies. By actively engaging in board discussions and decision-making processes, CFOs ensure the financial statements presented to shareholders are accurate, transparent, and reliable. This finding is consistent with the conclusions of Muttakin et al. (2019). Notably, three respondents did not address this particular aspect of the question.

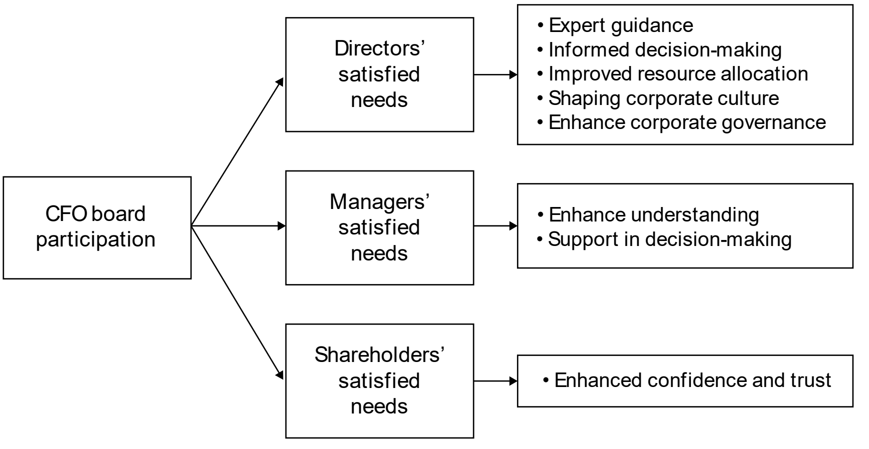
Overall, as depicted in Figure 1, the active involvement of CFOs in board activities is crucial for driving organisational success and aligning financial practices with the interests of all stakeholders.

4.3.2 Shareholder Perceived Reaction to CFO Contributions on MLE Boards

The next question solicited respondents' views on whether shareholders react positively or negatively to the four potential types of CFO board participation. Approximately half of the respondents *(14/31)* observed that many Maltese small shareholders have little financial literacy and demonstrate indifference to the CFO Board participation types. In contrast, a majority of the remaining respondents *(13/31)* highlighted that large institutional shareholders favor the inclusion of CFOs as BMs for additional reassurance. Additionally, a minority *(3/31)* noted that some shareholders, particularly large non-institutional ones, harbor reservations about CFOs serving as BMs rather than simply attending board meetings. These shareholders anticipate that the presence of CFOs as BMs will lead to fewer challenges with financial reporting issues. This perspective aligns with the findings of Kim et al. (2010), emphasizing the crucial role of institutional shareholder confidence in the integration of CFOs into the board for effective financial oversight. Figure 1 illustrates how CFO board participation meets the needs of directors, managers, and shareholders.

Figure 1

CFO Board Participation and the Satisfaction of Directors, Managers, and Shareholders



4.3.3 CFO Type of Board Participation and the Perceived Effectiveness of MLE Board Monitoring

The subsequent question explored whether CFO participation on the board influences the effectiveness of the board in monitoring MLE management. A majority of respondents *(23/31)* believed that CFO board participation does not impact the board's effectiveness in overseeing management. Notably, some of these respondents indicated that *(9/23)* effective monitoring only occurs when there exists a proper mix of EDs, NEDs, and INEDs. This balance fosters diversity in board perspectives and strengthens oversight mechanisms. Conversely, eight respondents *(8/31)* maintained that a CFO's role as a board member could result in the non-disclosure of management's hostile actions, thereby undermining effective oversight. This perspective contradicts the findings of Liu (2017).

4.3.4 The Influence of CFOs with Different Types of Board Participation

The study included a question regarding whether CFOs exercise greater influence on board proceedings through the implementation of any of the four types of board participation. A majority of respondents *(23/31)* reported that CFO membership on the board enhances their influence during board meetings, primarily due to the ability to exercise voting rights on significant matters, aligning with Mobbs (2011). In contrast, respondents perceived CFOs who participate as regular or specially invited members as having less influence. Furthermore, eight respondents *(8/31)* identified key factors that affect CFO influence, including the integrity of the other directors *(2/8),* board size *(2/8)*, the standards upheld by the chairperson *(2/8)*, and the character and persuasive abilities of the CFOs themselves *(2/8)*. Thus, analyzing the dynamics of these factors is crucial for understanding the extent of the influence of CFOs within boards.

This study demonstrates that CFO participation in board meetings enhances strategic alignment and financial oversight while preserving governance independence. However, granting CFOs full board membership poses risks to their independence, creating a governance trade-off. These findings support corporate governance guidelines that promote structured engagement for CFOs that are not membership-based. Future research should explore how these trends change across different regulatory environments and industries.

From a governance perspective, MLEs should consider structured models for CFO participation that enhance financial decision-making while preserving board independence. This study enriches the corporate governance literature by providing empirical evidence on how CFOs can effectively support board functions without holding full membership. The findings indicate that regulators and corporate policymakers should explore best practices to optimize CFO engagement without undermining oversight mechanisms. Future research should examine the effects of CFO participation across various industries and economic systems, focusing on the long-term impacts on corporate performance and investor confidence. Additionally, a comparative analysis across different regulatory frameworks could further validate governance structures that strike the right balance between financial expertise and board independence.

5. CONCLUSION

MLEs prefer CFOs to participate in board meetings regularly without becoming full members of the board. This ensures independent oversight while keeping financial concerns at the forefront. CFOs must possess financial acumen, problem-solving skills, effective communication abilities, regulatory knowledge, integrity, and the ability to work collaboratively as part of a team. The participation of CFOs in board meetings enhances strategic planning, communication, and governance while clarifying financial matters and the entity's economic position. Despite challenges like time demands and potential conflicts of interest, the benefits of CFO board participation outweigh the drawbacks, whether as members or as regular, non-member participants.

CFO involvement is crucial in supporting directors with strategic decision-making and shaping corporate culture. Managers benefit from the valuable financial insights that CFOs offer, while shareholders tend to have a neutral stance. Nonetheless, institutional investors show a preference for having CFOs as board members as they instill trust in financial reporting and contribute to the stability of dividends.

Although there are concerns regarding board independence, it seems CFO participation does not undermine the effectiveness of oversight. CFOs hold considerable influence on management and leadership in MLE boards, whether they serve as members or as regular participants. Even though MLE boards tend to favor CFO participation without full membership, their role remains impactful. Future research should examine CFO participation across various industries and analyze long-term trends in board integration.

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STATEMENTS

Data Availability

The authors declare that no new data were created or analyzed in this study. Data sharing is not applicable to this article.

Use of Artificial Intelligence

No generative AI tools were used for content creation or analysis. AI-assisted tools were used solely to support grammar and language refinement during the final editing stage. This did not affect the scientific rigor or originality of the work.

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The authors declare no conflict of interest.

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Author Contributions

SG: conceptualization, supervision, writing (review & editing).

PB: conceptualization, supervision, writing (review & editing).

OT: methodology, data collection, formal analysis, writing (original draft).

LE: investigation, validation, visualization, writing (review & editing).

NT: methodology, review & editing, project administration.

Ethical Approval

Not applicable.

Declaration of Originality

The authors confirm that this article is an original work that has not been published previously nor is under review elsewhere. It is derived in part from the second author's Master's dissertation, supervised and expanded by the co-authors for publication.

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FOOD SAFETY AND INFORMATION ASYMMETRY: IMPLICATIONS FOR THE AGRI-FOOD INDUSTRY

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Abstract

Aim: This study systematically organizes and critically analyzes the literature on food safety from the perspective of information economics. It identifies key informational issues, including information asymmetry, moral hazard, and adverse selection, and explores the proposed academic solutions to these problems. Additionally, the study highlights conceptual gaps in the existing research and proposes directions for future research. **Methodology:** The researcher conducted a literature review using the Scopus and Web of Science databases, focusing on academic studies related to food safety, economics, governance, and supply chain management. The review emphasized theoretical frameworks and coordination approaches, facilitating a structured mapping of the field's primary contributions and trends. **Results:** Food safety significantly influences the competitiveness of the agri-food sector. Effective management of food safety relies on the quality of inputs, the architecture of the value chain, and the implementation of control mechanisms. As the costs and complexities associated with safety measurements escalate, stakeholders must establish tighter coordination between public and private entities. Key mechanisms for ensuring food safety include Hazard Analysis and Critical Control Points (HACCP) systems, traceability tools, and voluntary certification schemes. Nonetheless, research remains limited regarding which governance approach is most effective in contexts characterized by varying degrees of information asymmetry. **Originality/value:** Despite the extensive research on food safety, few studies examine the issue through a structured lens of information economics. This study actively integrates concepts such as credibility, moral hazard, and adverse selection into a theoretical framework specifically designed for agri-food governance. By doing so, it provides analytical tools for researchers, policymakers, and practitioners who aim to enhance both efficiency and transparency in the management of food safety.

Keywords: food safety, food quality, asymmetric information, vertical coordination, co-regulation, safety and quality signals
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SEGURIDAD ALIMENTARIA Y ASIMETRÍA DE LA INFORMACIÓN: IMPLICACIONES PARA LA INDUSTRIA AGROALIMENTARIA

Resumen

Objetivo: este estudio organiza y analiza críticamente la literatura sobre seguridad alimentaria desde la perspectiva de la economía de la información. Se identifican los principales problemas informacionales, como la asimetría de la información, el riesgo moral y la selección adversa, junto con las soluciones propuestas en el ámbito académico. Además, se señalan vacíos conceptuales y se proponen líneas de investigación futuras. **Metodología:** se realizó una revisión de literatura en las bases de datos Scopus y Web of Science, considerando estudios académicos en las áreas de seguridad alimentaria, economía, gobernanza y gestión de cadenas de suministro, con foco en marcos teóricos y enfoques de coordinación. La revisión permitió mapear las principales contribuciones y tendencias en el tema. **Resultados:** la seguridad alimentaria es un factor clave para la competitividad en el sector agroalimentario. Su gestión depende de la calidad de insumos, la estructura de la cadena de valor y los mecanismos de control utilizados. A medida que la medición de la seguridad se vuelve más costosa y compleja, se requieren formas más estrechas de coordinación, tanto públicas como privadas. Entre los mecanismos más relevantes se destacan los sistemas HACCP, la trazabilidad y los esquemas de certificación voluntaria. Sin embargo, la evidencia sobre qué enfoque institucional es más eficaz ante distintos grados de asimetría informativa sigue siendo limitada. **Originalidad / valor:** aunque existen estudios sobre seguridad alimentaria, pocos han abordado el tema desde una perspectiva estructurada basada en la economía de la información. Este trabajo integra conceptos clave como credibilidad, riesgo moral y selección adversa en un marco teórico aplicado al análisis de gobernanza agroalimentaria. La propuesta ofrece herramientas útiles para investigadores, responsables de políticas públicas y actores del sector que buscan mejorar la eficiencia y la transparencia en los sistemas de control alimentario.

Palabras clave: seguridad alimentaria, calidad alimentaria, información asimétrica, coordinación vertical, corregulación, señales de seguridad y calidad

1. INTRODUCTION

Food safety significantly influences public health, consumer trust, and the global food economy. In this context, the agri-food system is undergoing a fundamental transformation. This transformation fosters stronger coordination among supply chain actors, including customers, processors, and producers. As a result, these actors enhance information exchange to align more effectively with consumer expectations (Barkema, 1993).

In today's dynamic landscape, food safety has emerged as a critical issue within the agri-food sector. Scandals such as Mad Cow Disease (BSE) or the mislabeling of beef as "best British beef" when it originated from South America have intensified public concerns regarding safety and transparency in the industry. The competitiveness of food companies in both national and international markets depends on their ability to adopt production processes that meet stringent food safety and quality standards (Holleran et al., 1999).

Furthermore, food safety has become more important than ever to consumers. Unnevehr (2003) identifies four reasons for this trend: Improved diagnostic techniques enable easier tracing of illnesses to food-borne pathogens; increasing consumer affluence has led to heightened demand for safer, higher-quality foods; new sources of food and new production practices have introduced additional risks into the food supply chain; and consumers are purchasing more prepared foods and dining out more frequently than ever before. As a result, the agri-food supply chain has emerged as a prominent subject of research in recent years (Chu & Pham, 2024)

Recent concerns, such as the widespread presence of microplastics in various food matrices, highlight the continuous emergence of complex food safety challenges that demand ongoing scientific scrutiny and effective mitigation strategies (Ziani et al., 2023). Despite the undeniable importance of food safety, academic research to date has predominantly focused on consumer perceptions and pathogen control processes implemented by producers, aiming to enhance safety through better pathogen management (see Clayton et al., 2003; Malcom et al., 2004; Marsh et al., 2004; Maruyama & Kikuchi, 2004; Nayga et al., 2003; Patil & Frey, 2004; Van der Gaag et al., 2004). Although scholars recognize the close relationship between food safety and the concept of a credence attribute (Starbird, 2007), this critical aspect has garnered limited attention. Among existing studies, Weiss (1995) emphasizes principal-agent theory as a suitable framework for analyzing food safety issues while discussing the challenges associated with its application. Additionally, Antle (2001) points out that the food safety market is characterized by imperfect information.

Despite the recent attention on food safety, research within the economics of information remains poorly integrated. The existing literature has identified several distinct problems, including moral hazard and adverse selection. Moreover, various solutions to manage these issues have emerged. Unfortunately, a comprehensive review that organizes and summarizes the evidence regarding food safety issues and management is lacking, which this paper seeks to address. This fragmentation leads to uncertainty about key findings and leaves many questions unanswered.

This paper addresses this critical gap by providing a structured review of food safety research through the lens of asymmetric information. It explores key informational failures, assesses academic responses, and identifies avenues for future research. Specifically, we focus on the following crucial research questions: What are the primary information problems encountered in terms of food safety? Are there corrective mechanisms to mitigate such information problems? Finally, what are the main gaps in knowledge about this relationship?

Overall, this study contributes to theory by organizing and framing food safety within an information economics paradigm and offers valuable insights for industry stakeholders and policymakers to navigate and address food safety challenges. This article will present a brief overview of the concept of food safety and its origins. By addressing issues of asymmetric information, the article provides a comprehensive review that synthesizes and integrates the main problems and solutions identified in the literature. The discussion will conclude with unresolved theoretical issues in food safety and propose directions for further research.

2. LITERATURE REVIEW

2.1 Food Safety and the Supply Chain

Consumers and processors can effectively prevent food safety failures by ensuring the safety of inputs, ingredients, and raw materials at the point of purchase (Starbird, 2005).

Revisiting the concept of food chain reveals that the majority of the food we consume originates from a series of critical economic stages, including production, processing, and distribution. Each of these stages plays a vital role in adding value to the final product, as food can diminish in value over time during storage, raising significant safety concerns (Yin & Wang, 2017). This article conceptualizes the supply chain as the complete process that encompasses agricultural production, harvesting or slaughtering, primary production or manufacturing, and extends through to storage and distribution for retail sale or use in catering and consumer practices.

Although the supply chain concept is not new, recent interest has surged due to the imperative to meet customer demands and enhance competitiveness. Vertical coordination refers to the organization of activities, resources, and information flow between suppliers and purchasing firms. Effective vertical coordination is essential for maximizing the benefits of a safe, high-quality, and efficient food supply business (Stringer & Hall, 2007). Given the rising demand for food safety emphasizes the interdependence among various levels of the supply chain, a more closely coordinated system is essential for improving responsiveness and swiftly adapting to changing conditions, ultimately enhancing competitiveness (Ziggers & Trienekens, 1999).

2.2 Definition of Food Safety and Food Quality

Food safety and food quality assurance serve as essential forms of guarantees in the food industry. Safety is defined as the assurance that food will not cause harm to consumers when it is prepared and/or consumed according to its intended use (Raspor, 2008). In contrast, the assurance of quality entails a guarantee that agreed-upon specifications have been met (Holleran et al., 1999). Therefore, if safety-related standard specifications are included in the quality assurance system, then the assurance of quality inherently includes safety.

Quality and safety attributes in the food industry often pose challenges for identification and observation (Holleran et al., 1999). These attributes are classified as credence attributes because they are difficult or impossible to measure (Starbird, 2007). Consequently, they create information asymmetry between buyers and sellers, complicating the buyer´s task of determining quality. As a result, Shafieizadeh et al. (2023) argue that the perceived credibility of information hinges on its perceived quality, which can significantly influence how information is adopted. Additionally, Akerloff (1970) asserts that institutional guarantees, such as quality assurance standards, are essential for mitigating the effects of quality identification and uncertainty.

2.3 Asymmetric Information Between Buyers and Sellers

Consumers often lack information regarding the quality attributes of most goods available on the market (Yoo & Joo, 2012). As previously mentioned, even after making a purchase, they are unable to ascertain these properties. This situation constitutes a market failure, as the availability of information is essential for effective market functioning. A primary explanation for this deficiency is that information is typically treated as a public good, leading to its undersupply in the market (Henson & Traill, 1993). Recent conceptual frameworks underscore the complexities associated with food credence attributes and their influence on information asymmetry within supply chains (Schrobback et al., 2023).

Despite the public good’s inherent characteristics of being nonrival and nonexcludable, Antle (1999) argues that information can function as a club good that is nonrival but excludable. In this context, the role of government is to establish a legal framework that allows consumers to access and utilize information. However, two critical factors must be considered. First, producers may not possess superior information about a product's safety attributes compared to consumers. This situation can lead to a scenario where all participants in the food chain experience what is termed "symmetric imperfect information." Second, while producers may indeed have more information than consumers, disseminating this information throughout the food chain can incur significant costs.

Two critical problems in ensuring food safety are defining what is considered safe and determining how to measure it. Food safety is often compromised by contamination from physical agents such as metal and glass, chemical agents like toxins, and biological agents like bacteria. Despite this knowledge, we still lack a precise definition of an appropriate level of food safety. In recent years, the government has stepped in to establish food safety standards, but the issue remains unresolved. This lack of consensus partly stems from conflicting interests among various actors in the food chain and a shortage of scientific evidence that links contamination rates to illness (Starbird, 2005).

The ambiguous definition of safety creates uncertainty for firms operating within the supply chain regarding the economic consequences of their actions. Although firms can estimate the costs associated with a lot failing a safety inspection, they struggle to calculate the probability of such events due to the lack of a precise definition of safety. As a result, they cannot accurately assess various issues, such as the return on investments aimed at improving safety or the value of testing the safety of inputs.

Measuring safety offers several advantages. First, it enables buyers to monitor a supplier's ability to meet specifications related to food safety. Through repeated transactions, buyers can develop a statistical profile of the supplier's performance. Second, measuring allows for the differentiation of safe lots from unsafe ones prior to their movement through the supply chain. Third, when suppliers are aware that the buyer is measuring product safety, those who invest less effort in safety may be deterred from entering into contracts with the buyer. When this happens, testing effectively segregates safe suppliers from unsafe ones before any transaction takes place (Starbird, 2007).

Despite a precise definition of safety, measuring it remains prone to significant error. The measurement process is subject to two types of error. Diagnostic error arises from misclassifying a sample as either contaminated or uncontaminated, which can be quantified through the sensitivity and the specificity of the test. Let alpha (α) represent the sensitivity of the test and beta (β) represent its specificity. Sensitivity refers to the probability that the test correctly identifies a contaminated sample, while specificity refers to the probability that the test accurately identifies an uncontaminated sample. Diagnostic error is linked to false positive and false negative test results. A false positive occurs when a test incorrectly indicates the presence of a pathogen, represented mathematically as $1-\beta$. Conversely, a false negative occurs when a test incorrectly indicates the absence of a pathogen, represented as $1-\alpha$.

Another source of error in food safety testing is sampling error. Due to the immense volumes of food that move through the supply chain daily, buyers must rely on sampling to assess the safety of purchase lots. Sampling error arises when the characteristics of the sampled portion do not accurately reflect those of the entire lot from which it is drawn. While random sampling can help mitigate this error, implementing effective random sampling techniques and ensuring their consistent application poses significant challenges. This difficulty persists despite recent advancements in microbial sampling and detection technologies (Yang et al., 2022).

An interesting conclusion stemming from the presence of diagnostic and sampling errors is that buyers often possess less knowledge about the safety of the products they purchase than suppliers do. This lack of information implies that an unsafe lot may occasionally pass inspection, while a safe lot may fail inspection. The potential impact of this risk on an individual producer's compensation affects the behavior of both suppliers and buyers, as it directly influences their profitability (Starbird, 2005, 2007).

3. METHODOLOGY

The researcher conducted a literature review on food safety from an informational perspective. To achieve the established objectives, the researcher utilized the major academic search engines, Web of Science and Scopus, which provide access to numerous indexed journals relevant to the study and are widely recognized by the international scientific community. In both databases, the researcher performed initial searches using general keywords such as "food safety," "food quality," and "asymmetric information." Subsequently, the author executed Boolean searches that combined terms such as "food safety and asymmetric information," "food quality and asymmetric information," "food safety and moral hazard," and "food safety and co-regulation." This methodology allowed the researcher to broaden the range of related articles and enhance the scope of the information available. Moreover, articles that fell beyond the scope of the study were excluded, such as those focused on medical or nutritional aspects. The research specifically targets management-related areas, aligning with the defined objectives.

4. RESULTS

4.1. Implications of Asymmetric Information

Measurement error has long been recognized as a source of imperfect or asymmetric information about food safety, which significantly impacts individual and institutional behavior. Specifically, when consumers lack accurate information regarding safety, it can result in either an oversupply of unsafe products or a complete halt in transactions (Starbird, 2005).

When suppliers have superior information about product quality compared to buyers, the market experiences three rather unpleasant economic phenomena: moral hazard, adverse selection, and significant transaction costs.

Moral hazard problems arise when the production of safer products incurs higher costs than those of less safe alternatives, while consumers are unable to directly observe the safety features of these products. In this context, suppliers may lack motivation to prioritize safety (Vosooghidizaji et al., 2019). Specifically, while a supplier may commit to enhancing safety, there are instances where they fail to fulfill this promise. Due to the inherent diagnostic and sampling errors associated with safety measurement, buyers cannot be confident that suppliers have delivered safe food ingredients. This uncertainty challenges stakeholders and drives ongoing research into supplier behavior and effective quality investment strategies (Wu et al., 2024).

When transactions occur between processors and consumers, food safety creates a double moral hazard problem. This issue arises from the assumption that both consumers and processors engage in unobservable preventive measures to reduce the risk of food-borne illnesses. Recent outbreaks of food-borne illnesses (Mead et al., 1999; Roe et al., 2000) have heightened consumer concerns about food safety. As a result, the potential costs of contracting a food-borne illness have motivated consumers to take preventive actions aimed at minimizing their likelihood of becoming ill (Buzby et al., 1996; Fein et al., 1995; Foster & Just, 1989; Roe et al., 2000; Swartz & Strand, 1981).

Producers actively seek to invest resources in safety due to consumer demand and the need to mitigate costs related to product recalls, disposal of harmful food, and damage to reputation resulting from outbreaks (Thomsen & McKenzie, 2001). This scenario creates a double moral hazard problem, resulting from risk-sharing and imperfect information on both sides of the transaction (Cooper & Ross, 1985; Holmström, 1979). On one side, consumers face challenges in verifying how a product is processed, packaged, distributed, or stored, rendering the precautions taken by processors unobservable. Conversely, processors frequently lack the ability to determine how consumers handle and prepare their food. As a result, both the efforts made by processors - information that consumers cannot see or access – and the handling practices of consumers – private information that producers cannot observe – create a dual moral hazard issue. Antle (2001) characterized this situation as one of symmetric imperfect information.

Elbasha and Riggs (2003) present a model of double moral hazard in which both consumers and producers engage in unobservable preventive measures to mitigate the risk of foodborne illnesses. A significant concern in this context is that the losses resulting from such illnesses are shared between consumers and producers in accordance with the existing tort law. They identify the solution that maximizes profits and demonstrate that this risk-sharing arrangement, coupled with imperfect information, leads to an incentive problem.

Adverse selection occurs when low-safety producers systematically drive out high-safety producers in markets where safety is not observable. This phenomenon arises from the inability to distinguish between suppliers who can provide safe food and those who cannot. Suppliers often assert that they possess specific skills or abilities related to safety upon hiring; however, due to the imperfect observability of safety, buyers cannot completely verify the type of supplier they engage with. As a result, buyers tend to offer prices that reflect the "average" quality or safety associated with the suppliers available. It means these average prices often fail to adequately compensate the highest-quality suppliers, leading them to exit the market (Akerlof, 1970).

In the context of adverse selection, Starbird and Amanor-Boadu (2007) explore how contracts that include traceability can help processors select against producers who fail to meet safety specifications. They assert that the motivation to exclude unsafe producers depends on the magnitude of failure costs and the proportion of these costs allocated to producers. Transaction costs, which encompass expenses associated with conducting an economic exchange - such as search, selection, bargaining, monitoring, and enforcement – play a crucial role in this relationship (Madhok, 2002). Consequently, transaction costs encompass every aspect of the contractual relationship between customers and suppliers (Hobbs, 1996). Since production costs remain stable across different methods of organizing exchanges (Williamson, 1996), TCE predicts that the processors will opt for the organizational structure that minimizes transaction costs (Van Hoek, 2000). Williamson (1979) identifies market contracting as the most efficient governance mechanism due to the inherent benefits of competition. He further explains that the incentive for vertical integration increases as the transaction costs associated with using the marketplace transactions rise (Klein et al, 1978; Williamson, 1974, 1975, 1986).

Spot markets can encounter several issues that hinder their effectiveness in ensuring food safety to consumers. One major concern is that traditional spot market pricing systems may not adequately respond to shifts in consumer demand if prices fail to reflect the specific attributes of products that consumers prioritize. When the pricing system does not accurately represent consumer preferences for food safety, producers lack the necessary incentives to prioritize the production of safer food options or are penalized for producing inferior products. Given that food safety incurs higher costs, producers lack incentives to incorporate the desired attributes (Ward, 2001). To ensure that production is driven by product attributes that cannot be effectively priced, an alternate coordination system is needed, such as contracting and vertical integration.

In the context of food safety and quality assurance, transaction costs play a significant role as they are influenced by food safety regulations and customer requirements. For instance, food safety technical regulations may mandate that a firm trace products through the production process and identify potential sources of contamination, thereby impacting transaction costs.

Measuring the costs associated with identifying and approving competent food suppliers poses significant challenges. After identifying potential suppliers, auditors must assess their production systems and evaluate their products and processes. Transaction costs include supplier expenses related to supplier identification, contract negotiation, and the verification and enforcement of contracts.

To assess a product's safety, a buyer should verify that the seller employs a "safe" production process. However, this verification process incurs a significant search cost, particularly when the buyer requires a diverse range of suppliers or seeks products that pose a higher risk of safety hazards. During contract negotiations, buyers establish product and process specifications and insist on supplier compliance with these standards. Once both parties agree on the product specifications, buyers typically request supplier site visits or audits prior to finalizing the contract. These visits aim to confirm that all product and process specifications are effectively implemented.

Additionally, contract verification and enforcement are crucial elements of the exchange process. Although buyers and sellers seem to mitigate risks associated with exchange, such as incomplete contracts, they cannot foresee all potential issues at the time of drafting contracts. Consequently, emphasizing contract verification and enforcement becomes essential (Holleran et al., 1999).

4.2. Correcting Problems Associated with Imperfect Information

Several effective strategies exist to address the issues stemming from imperfect safety information. The most straightforward approach involves obtaining more comprehensive information about suppliers and the quality of their products. While this method can reduce some of the informational asymmetry, it is essential to recognize that acquiring precise information can be costly and is sometimes infeasible.

Another viable strategy is implementing an intermediate degree of vertical coordination, through contracts or higher levels of vertical integration. Specifically, this approach entails designing contracts that attract safe suppliers while deterring those that are unsafe. Such contracts may specify bid prices, product specifications, and inspection protocols that differentiate between safe and unsafe suppliers. If the buyer is unable to effectively segregate these suppliers, they can engage in vertical integration by acquiring or merging with a supplier to ensure product safety.

A third strategy focuses on enhancing the value of revealed information, encouraging suppliers to demonstrate their safety standards through various signals. These safety and quality signals can include the adoption of process standards, guarantees, warranties, and third-party certifications.

Finally, a fourth strategy is co-regulation, where collaboration between producers and regulatory bodies enhances safety oversight. The subsequent sections will analyze the solutions for imperfect information, which encompass (i) acquiring information about the supplier´s product, (ii) implementing vertical coordination, (iii) establishing signalling mechanisms, and (iv) engaging in co-regulation.

4.3. Acquiring Information About the Supplier´s Product

The first strategy to enhance the safety of the food supply focuses on implementing inspections and traceability systems. Hobbs (2004) asserts that one crucial function of traceability within a food supply chain is to verify credence quality attributes, a process known as ex ante quality verification[1]. Research on information asymmetry in agri-food supply chains further supports this argument (Schrobback et al., 2023). Inspection systems utilize samples and tests to collect information regarding safety and quality. Consequently, buyers analyse inspection results to determine whether a supplier´s product meets safety standards.

All traceability systems share the common element of accumulating information about product attributes, including safety and origin, as products move through the supply chain. The breadth, depth, and precision of the accumulated information define the effectiveness of a traceability system. According to Golan et al. (2004), the breadth of information pertains to the varied product attributes being monitored, the depth reflects how far information extends throughout the supply chain, and the precision indicates the specificity and accuracy of this information. The New Era of Smarter Food Safety initiatives, combined with the growing adoption of digital technologies such as Artificial Intelligence (AI), blockchain, and the Internet of Things (IoT), significantly enhance the capabilities of these systems. These advancements enable more efficient monitoring, real-time decision-making, and proactive risk management (Aslam et al., 2024; Lin et al., 2022; U. S. Food and Drug Administration, 2023). As a result, without effective inspection mechanisms, unsafe food can enter the supply chain unchecked, and without traceability, it becomes impossible to identify the supplier responsible for unsafe products.

The predominant measure of food safety identified in the literature is the proportion of a producer´s output that complies with all government safety standards (Baiman et al., 2001; Lim, 2001; Starbird, 2005; Starbird & Amanor-Boadu, 2007). This definition inherently assumes that government standards effectively distinguish between safe and unsafe food. Traceability entails identifying the source of a product responsible for a food safety failure. Since many food safety failures result from sequential errors within a supply chain, it is unlikely there would be only one responsible party (Buzby et al., 2001). Starbird and Amanor-Boadu

[1] Hobbs (2004) also identifies two other distinct functions for traceability in a food supply chain: (a) as a reactive traceback mechanism when contamination problems occur, and (b) as a means to strengthen liability incentives.

(2007) developed a measure called the cost allocation factor, which quantifies the proportion of costs associated with food safety failure costs that can be attributed to the producer of unsafe food. It is important to recognize that information obtained from inspection and traceability systems alone does not enhance food safety. Rather, stakeholders must actively use information to remove unsafe food that is already present in the supply chain and to prevent unsafe food from ever entering the supply chain in the first place.

What drives systems to prevent unsafe food from entering the supply chain? What incentives motivate suppliers to produce and deliver safer food? Inspection systems enhance food safety by imposing significant costs when a lot fails inspection, while traceability systems enable the allocation of costs associated with unsafe food back to its source. A critical concern is that not every unsafe lot that passes inspection will cause illness, but the associated costs of illness from harmful food are likely to be substantial.

Starbird and Amanor-Boadu (2006) make an important contribution to understanding this issue. They argue that the effectiveness of inspection and traceability systems hinges on the accuracy of inspections. Errors in inspection – encompassing both diagnostic and sampling mistakes -- can result in safe products failing inspections and unsafe products passing them. Such errors directly impact supplier profits and, in turn, the ability of inspection and traceability to incentivize suppliers effectively.

An important question explores the impact of inspection error on motivation, which remains unclear. On the one hand, inspection serves as a powerful incentive only if safe products pass and unsafe products fail inspections; this outcome is more likely when inspection error is low. Conversely, traceability offers significant incentives primarily when unsafe products pass inspection, a scenario that becomes more probable when inspection error is high. Ultimately, the effectiveness of inspection and traceability systems depends on the characteristics of the inspection policy. These inspection policies can be negotiated directly between buyers and suppliers or established by an independent third party.

4.4. Vertical Coordination

Various governance mechanisms effectively coordinate the transformation of farm products into food products. These coordinating structures create a continuum, with external coordination positioned at one extreme and internal coordination at the other. For example, agricultural cooperatives demonstrate that vertical coordination linearly enhances cooperative performance; however, the relationship between this coordination and the distribution of internal benefits among members often reveals a more nuanced, frequently inverted U-shaped pattern (Zhong et al., 2018).

External coordination refers to the exchange of information and goods between adjacent stages of the food market that occurs independently of any single firm. The most extreme form of this coordination is open production, where the production process concludes before marketing commitments are established, leading to sales in spot markets (Barkema & Drabenstott, 1995).

The increasing recognition of food safety's importance among food providers, juxtaposed with rising consumer dissatisfaction regarding food safety, suggests a significant failure within the current market system (Boehlje et al., 1995; Hanf & Wright, 1992). Consequently, this dynamic indicates a market structure shift from open production to more structured practices such as contracting and vertical integration.

Contracts have emerged as a prevalent method in the food industry for the production and marketing of agricultural products. To deter suppliers from delivering unsafe food, these contracts frequently incorporate specific food safety standards.

A contract qualifies as a safe contract when it is accepted by safe suppliers and rejected by unsafe suppliers (Starbird, 2005). Safe suppliers are those who have adopted and implemented advanced food safety methods, resulting in a minimal failure rate of their lots in meeting food safety standards. In contrast, unsafe suppliers do not employ these sophisticated food safety practices, l resulting in a higher incidence of failure to meet safety standards in their lots. Consequently, a greater proportion of lots from unsafe suppliers are likely to be contaminated (Starbird, 2007).

The selection of appropriate contract parameters is a central challenge that buyers encounter when implementing effective safe contracts. A well-designed safe contract should persuade reliable suppliers to engage in the transaction while deterring those that are unsafe. Key contract parameters[2] related to safety are included in the bid price, safety standards, premiums, or discounts associated with deviations from these standards, the sampling plan, the diagnostic test employed to measure safety, and provisions for sharing the costs of food safety failures.

Starbird (2007) emphasizes that contract provisions significantly influence food safety by affecting the costs associated with delivering contaminated products. Suppliers of contaminated food incur two types of costs. The first type, known as inspection failure costs, arises when a contaminated lot is delivered and subsequently fails inspection. This cost encompasses the expenses related to disposing of the contaminated food, any penalties or fines imposed on the supplier, and the additional production costs required to replace the rejected lots.

The second type of cost, known as the safety failure cost, arises when a contaminated lot is delivered and passes inspection. This cost pertains to the consequences of contaminated food entering the buyer´s production system, potentially resulting in illness when the product reaches the consumer. Estimates of the costs associated with safety failures are notably challenging to obtain (see Buzby et al., 2001). Furthermore, these costs vary significantly between private firms, which aim to maximize profits, and public agencies, which focus on enhancing consumer welfare and public health. Additionally, a crucial characteristic of safety failure costs is that they impact suppliers only when the party responsible for the failure can be identified and held accountable for a portion of the associated costs.

The probability that a supplier incurs inspection failure costs or safety costs depends on the accuracy of the inspection procedure. Specifically, a false positive test result increases the likelihood that a supplier has to pay inspection failure costs. Similarly, a false negative test result affects the likelihood that a contaminated lot successfully passes inspection. Consequently, if a contaminated lot passes inspection, the supplier is likely to bear a portion of the safety failure costs.

Ultimately, a contract's effectiveness in attracting safe suppliers and deterring unsafe ones is contingent upon several factors, including the supplier's production costs, the likelihood of inspection failure, the probability of a safety failure, and the costs associated with both inspection and safety failures. When the testing procedure is accurate and leads to the

[2] Of course, supply chain contracts include many other provisions in addition to those that influence safety.

rejection of non-compliant lots and incurs substantial failure costs, it serves as a significant deterrent to unsafe suppliers (Starbird, 2007).

Researchers have long recognized that poor contract design leads to significant problems. One such challenge arises when the costs associated with safety failures and inspection failures are excessively high, resulting in market failure due to a lack of supplier participation. Conversely, when these costs are too low, segregation becomes impractical, as all suppliers are likely to accept the contract.

Even in cases where a contract successfully segregates suppliers, adverse selection may still occur among those suppliers whose contamination rates fall below the maximum allowable limit. If the buyer cannot differentiate between suppliers with nearly zero contamination and those whose contamination levels approach the maximum permitted rate, the buyer tends to offer a price that fails to satisfy the safest suppliers. In this scenario, the safest suppliers may be inclined to relax their food safety efforts. Furthermore, if suppliers find ways to evade inspection, it creates perverse incentives that foster dishonest practices, ultimately leading to the introduction of unsafe food into the supply chain (Starbird, 2005; Van Ravenswaay & Bylenga, 1991).

The increasing adoption of contracts in food supply chains primarily stems from the heightened demand for traceability (MacDonald et al., 2004, p. 62). Traceability refers to the capability to track a product's origins as it moves through the supply chain. This concept serves several purposes, including enhancing supply management, improving safety and quality, and differentiating finished goods based on credence attributes (Golan et al., 2004). By enabling the identification and recall of products from unsafe sources, traceability plays a crucial role in promoting food safety and allows for the allocation of costs associated with unsafe food to the responsible parties.

Several researchers have analyzed the influence of supply chain contract provisions on quality and safety. Among the earliest studies, Lim (2001) examines a market characterized by n types of suppliers, each differentiated by the quality of their products. This study identifies the optimal inspection and warranty policies for buyers navigating this heterogeneous yet competitive market. In his model, the price remains fixed, and inspection is flawless. However, both the probability of a lot being inspected and the proportion of the warranty cost allocated to the supplier are variable. Lim concludes that suppliers of lower-quality products are more frequently offered contracts that include inspection provisions, while high-quality suppliers are more likely to receive contracts with warranty provisions.

In another study, Chalfant and Sexton (2002) investigated the issue of inaccurate quality grading in the California prune industry. They analyze how faulty testing affects a market populated by heterogeneous suppliers. Notably, their research does not explicitly address the issue of traceability. Their findings reveal that errors in the grading process exacerbate the adverse selection problem, leading to the undervaluation of high-quality products and the overvaluation of low-quality ones. Additionally, Hobbs (2004) examined how traceability systems can rectify information asymmetries related to food safety and other attributes of food quality.

Balachandran and Radhakrishnan (2005) develop a double-moral hazard model to examine the dynamics of supply chain relationships, specifically highlighting the buyer's ability to impose inspection failure costs and/or external failure costs on the supplier. They assume both the inspection process and the ability to accurately assign responsibility for external failures (traceability) are flawed. Their findings indicate that the accuracy of the inspection procedure significantly influences the fulfillment of fairness criteria within the supply chain.

More recently, Starbird and Amanor-Boadu (2007) analyze how specific contract provisions—namely, traceability and cost allocation—affect the behavior of buyers and sellers concerning food safety. Their model, which accounts for heterogeneous producers and imperfect testing by processors, indicates that for contract selectivity to succeed, food safety failure costs must be substantial, with a significant proportion allocated to producers. In contrast, low or unallocated costs result in adverse selection that disadvantages safe producers. Although contracting provides benefits, it also incurs costs. Contracts often limit producers' control, necessitating compensation for lost autonomy (Key, 2005). Additionally, writing and enforcing contracts can be expensive, which typically makes them practical only for significant product volumes (Lambert & Wilson, 2003). Finally, contracts introduce strategic risks for sellers, particularly the risk of hold-up, wherein reliance on a single buyer due to specific investments may diminish bargaining power and disincentivize further investment.

Given these disadvantages, buyers may find that spot markets provide the most effective means of organizing transactions. Consequently, they can choose among spot markets, contracts, and vertical integration based on which method best governs a specific set of transactions.

Vertical integration represents the highest level of vertical coordination between production and handling activities required to transform a product from its primary form and location to its consumer-ready state in the retail market (Kilmer et al., 2001). Agricultural economists attribute the recent increase in vertical integration within the food supply system to heightened consumer awareness of product safety (Caswell et al., 1994; Hennessy, 1996; Roberts et al., 1997; Streeter et al., 1991).

Hennessy (1996) constructed a model that demonstrates the incentives for integrating food production and processing. In this model, producers opt to invest in quality control, while processors conduct quality tests on the products they purchase from producers. Hennessy concludes that when testing is costly and imperfect, the market prices between producers and processors reflect these testing imperfections. He also finds that in the absence of informative tests or when the testing costs are prohibitively high, buyers are reluctant to pay a premium for quality, leading producers to hesitate in investing in quality control.

In this scenario, vertical integration can effectively eliminate the need for testing to ascertain quality, thereby removing the externality associated with asymmetric information and facilitating the efficient provision of high-quality product. The advantages of vertical integration, particularly in addressing information imperfections and minimizing the need for expensive external verification, are further enhanced by the incorporation of modern technologies such as blockchain in food supply chains (Chu & Pham, 2024).

Antle (1998) presents an alternative perspective on vertical integration by questioning how imperfect testing contributes to asymmetric information between producers and processors. Traditionally, it is assumed that the supplying firm is aware of its reliable quality control technology, while the processor lacks this knowledge. However, since most quality control technologies are fallible and necessitate testing to validate their performance, it is uncertain whether producers can genuinely know if their quality control is "reliable." Consequently, when both producers and processors have access to the same testing technology, which is inherently less than 100 percent accurate, they operate with imperfect information, creating a scenario of symmetric imperfect information.

When tests yield no informative value, vertical integration fails to address the challenge of delivering high-quality products. In such scenarios, producers and processors do not have access to any reliable information about quality and vertical integration is not a viable solution to the provision of safer products (Antle, 1996). The only feasible solutions to this issue lie in advancements in testing methodologies or other quality control technologies.

Kilmer et al. (2001) conducted the first study to quantify the relationship between food safety and vertical integration in agricultural markets. Their results provide strong evidence supporting the hypothesized positive relationship between food safety and vertical integration, particularly in the contexts of fungicide and insecticide residues found in Florida strawberries and the insecticide residues in Florida tomatoes.

However, it is important to recognize that complete vertical integration entails several disadvantages, including high capital demands and reduced flexibility (Ziggers & Trienekens, 1999). Additionally, significant scale differences often exist between successive stages of the value chain. Therefore, vertical coordination frequently emerges as a more suitable strategy than vertical integration.

4.5 Safety and Quality Signals

In the context of food safety, consumers find information about raw materials and production processes essential when making decisions regarding the purchase, handling, and consumption of food (see, e.g., Caswell, 1998; Collins, 1997; Ippolito & Mathios, 1990, 1995; Roe et al., 2000; Petrescu et al., 2022). When the market does not sufficiently incentivize producers to disclose relevant information, implementing quality assurance systems proves valuable in enhancing market efficiency.

Governments and the private sector have actively responded to the growing interest in food safety, resulting in a new paradigm for food safety and quality regulation and management. At the public level, authorities have revised regulations and implemented significant institutional changes to enhance the oversight of food safety and quality (Jaffee & Henson, 2004). Specifically, the government has updated national-level food legislation and technical requirements for food processing, handling, and production processes, as well as product liability law. These revised technical requirements and liability laws directly influence the costs associated with transactions, thereby creating private incentives for the adoption of voluntary quality assurance systems.

In response to changes in public standards, the private sector has increasingly taken steps to address the food safety and quality concerns of consumers. A primary motivation for this trend has been to mitigate reputational and commercial risks associated with food product safety, which often relates to the nature of regulatory requirements. Consequently, in addition to the incentives derived from food and liability law, private incentives compel small and medium-sized enterprises (SMEs) to implement quality assurance systems (Karipidis et al., 2009). Furthermore, companies are moving beyond merely adhering to approved practices that meet technical requirements; they are also adopting quality assurance practices and systems. Ricker-Gilbert et al. (2025) illustrate this trend in their study, showing that companies adopting minor safety measures, like the use of measures already considered best practices, like the use of airtight bags, receive favorable reactions from consumers. These customers are often willing to pay a premium for the enhanced assurance of quality and safety these measures offer.

Quality assurance systems play a crucial role in exchanges where food safety and quality attributes are not directly observable. Their primary objective is to assure customers that the agreed-upon product characteristics and production processes are consistently met. By establishing technical requirements and contractual arrangements, these systems define the expectations of both contracting parties in advance. Subsequently, the quality assurance system verifies that the agreed-upon characteristics and attributes are delivered post-production.

A quality system consists of an organizational structure, defined responsibilities, processes, procedures, and resources that collectively facilitate effective quality management ("Nederlands Normalisatie Instituut Normcommissie Standaarprocedures en Criteria voor Evaluatie van Kwaliteitsbeheersingssystemen", 1989). In the food industry, food safety and quality assurance systems can manifest in various forms: (1) private voluntary international quality assurance standards, such as ISO 9000; (2) national farm-level assurance systems; (3) and proprietary quality assurance systems (Holleran et al., 1999).

Voluntary quality assurance standards establish internationally accepted procedures and guidelines aimed at maintaining consistent quality (Zaibet, 1995). One prominent example is ISO 9000 (International Organization for Standardization), which certifies organizations to ensure a uniform production process. This system consists of three primary standards, ranked from the most to least comprehensive: ISO 9001, ISO 9002, and ISO 9003. ISO 9001 encompasses all aspects of design, development, production, installation, and servicing. In contrast, ISO 9002 provides guidance for developing a quality management system when design control is not necessary. ISO 9003 focuses exclusively on final inspection and testing.

The certification of a voluntary quality assurance standard communicates to external parties that a firm has implemented a documented quality management system. In contrast, national assurance systems provide consumers with the assurance that a nation's farms produce products according to established guidelines. Typically, these systems prescribe production practices that extend from the farm level through the retail level, encompassing aspects such as transportation and storage.

The United Kingdom specifies unique safety and quality requirements that commonly involve reliance on third-party auditing and certification. These private or public certifiers assess, evaluate, and certify claims based on defined standards and methods (Deaton, 2004). Their emphasis on independence, objectivity, and transparency fosters trust and limits liability (Tanner, 2000; Zuckerman, 1996). While traditional perspectives view third-party certification as objective technical tools (Fagan, 2003; Golan et al., 2001; Sanogo & Masters, 2002; Tanner, 2000), there are arguments suggesting that it also reorganizes and disciplines the supply chain, resulting in various social and economic implications (Busch, 2000; Hatanaka et al., 2005).

Food manufacturers must select and implement the most appropriate quality assurance (QA) system, a process complicated by the unique characteristics of agri-food production (Luning et al., 2002). However, measuring the extent to which these systems truly assure food quality poses significant challenges, hindering effective selection and application (Van der Spiegel et al., 2003). Nonetheless, the adoption of QA systems can reduce transaction costs (Holleran et al., 1999). While suppliers may face short-run sunk costs during implementation, the adoption of these systems is likely to improve market access and potentially lower costs in both operational and buyer-supplier transactions (Bredahl et al., 1997).

4.6 Co-Regulation

The rising public concern about food safety has compelled government agencies to adopt more prescriptive and proactive regulatory measures within the food industry. This trend is evident in the substantial increase in government oversight of food safety over the past decade, which includes the introduction of ex ante direct regulations and ex post indirect controls (Henson & Caswell, 1999). Concurrently, as previously noted, private mechanisms for food safety control have emerged robustly and now play an important role in ensuring a higher level of food safety. As a result, a complex network of both public and private incentives has developed to promote the implementation of enhanced food safety controls (Gao et al., 2023).

Although the potential benefits of co-regulating food safety are apparent, co-regulation remains a relatively novel concept in many parts of the world. A lack of trust among participants in the food supply chain, coupled with concerns about the risks associated with allowing market forces to influence food safety regulation, discourages closer coordination between private and public resources in controlling food safety.

Recent evidence indicates that co-regulation is emerging as a valid approach for enhancing food safety regulation (Liu et al., 2019), influenced by both regulatory change and the evolving structure and operations of food supply chains. In the European Union, recent developments in the regulatory environment are fostering greater collaboration between regulatory agencies and the private sector in the management of food safety. In the United States, this is evident in the implementation of the Hazard Analysis Critical Control Points (HACCP) across a number of key product sectors. This is shifting the responsibility for monitoring food safety to business operators. Additionally, Canada is adopting risk-based enforcement and monitoring strategies as a means to improve the efficacy of enforcement efforts at both the federal and provincial levels.

Garcia Martinez et al. (2007) examine the potential for co-regulation of food safety in the UK and North America, highlighting the distinct differences in established regulatory processes between these regions. Their study concludes that opportunities for co-regulation exist, albeit to varying degrees across the countries analysed, yet significant obstacles hinder the widespread adoption of co-regulatory practices in food safety. In Australia, Arup et al.(2020) argue that large supermarket chains serve as the primary agents of co-regulation, while civil society's influence diminishes due to a lack of government support and legal backing.

5. DISCUSSION

This literature review addresses a critical gap in food safety research by integrating an information economics perspective to systematically organize and synthesize the main challenges and solutions. Food and agribusiness firms increasingly operate in competitive markets where food safety plays a decisive role in maintaining competitiveness (Holleran et al., 1999; Unnevehr, 2003). Establishing food safety within the agri-food sector requires careful attention to the quality of raw materials, production practices, and the overall structure of the value chain.

The feasibility and cost associated with measuring product safety significantly influence the structure of market relationships (Hobbs, 1996). When safety measurement is straightforward and inexpensive, firms can maintain less stringent vertical links. Conversely, when measurement proves challenging or costly, tighter vertical coordination may be required. Furthermore, the rise of differentiated product specifications has intensified the challenge of ensuring that the desired product, complete with the requisite safety attributes, is indeed the one being transacted.

Institutional responses to food safety problems differ, ranging from minimal public intervention that allows market mechanisms to operate independently, to direct regulation, such as the establishment of national farm-level assurance systems (Henson & Caswell, 1999). In addition to public measures, numerous private strategies exist, including the adoption of voluntary international quality assurance schemes and contractual arrangements that promote vertical coordination (Gereffi et al., 2005; Trienekens & Zuurbier, 2008).

6. THEORETICAL AND PRACTICAL IMPLICATIONS

This study makes a significant contribution to theoretical discussions by organizing and systematizing the fragmented literature on food safety through the lens of information economics. By explicitly incorporating key concepts such as credibility, moral hazard, and adverse selection (Akerlof, 1970; Weiss, 1995; Starbird, 2007), the study enhances our understanding of how informational problems influence food safety outcomes and governance structures. This unified analytical framework lays the groundwork for future academic research exploring the intersection of food safety and economic information theory.

The study provides valuable insights for stakeholders throughout the agri-food sector. For businesses, it suggests strategies to manage information asymmetry, including certifications, vertical coordination, and digital traceability systems. For policymakers, it underscores the necessity of adaptive regulations that correspond to the informational risks present at each stage of the supply chain. Ultimately, the findings promote the development of more efficient and transparent governance mechanisms to ensure food safety across diverse contexts.

7. LIMITATIONS AND FUTURE RESEARCH LINES

While this study offers a comprehensive conceptual review, it is limited by its theoretical nature. It does not include empirical evaluation of the mechanisms discussed, nor does it distinguish between different regions, sectors, or levels of risk. These aspects represent fertile ground for further research. Future studies could empirically investigate whether advanced technologies, such as artificial intelligence, blockchain, the Internet of Things, and remote sensing, can improve traceability, reduce information asymmetry, and lower transaction costs in food supply chains (Bermeo-Almeida et al., 2018; Galvez et al., 2018; Queiroz et al., 2020; Rogerson & Parry, 2020). It is also relevant to examine how increased transparency, such as consumer access to full product histories, influences consumer confidence in both the short and long term. Finally, comparative studies on the effectiveness and efficiency of different governance mechanisms under varying risk scenarios could help determine which approach is most appropriate depending on the context.

8. CONCLUSIONS

An effective and credible food safety regulatory system plays a fundamental role in shaping public policy. The inherent uncertainty surrounding food safety necessitates an integrated chain approach that actively incorporates both safety and quality assurance (Caswell & Johnson, 1991). This approach must begin with clear specifications for raw materials and ingredients, ensuring that they adhere to established safety and quality standards prior to further processing.

Food safety management systems should be grounded in a comprehensive understanding of the production process and its inputs. A widely recognized methodology for achieving this is Hazard Analysis and Critical Control Points (HACCP), which focuses on identifying critical control points at each stage of production, distribution, storage, and consumption (Campden & Chorleywood Food Research Association, 2003; Zhou et al., 2022). Moreover, implementing robust traceability, particularly concerning raw materials, is essential for verifying the effectiveness of control procedures (Stringer & Hall, 2007). By integrating these elements across the value chain. organizations can significantly enhance food safety and strengthen consumer confidence.

STATEMENTS

Data Availability

The data that support the findings of this study are available from the corresponding author upon reasonable request.

Use of Artificial Intelligence

No generative artificial intelligence tools were used in the preparation, analysis, or writing of this manuscript.

Conflict of Interest

The author declares that there are no conflicts of interest related to this research or its publication.

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Author Contributions (CRediT)

TGM: conceptualization, methodology, formal analysis, writing, original draft, review & editing.

Ethical Approval

Not applicable.

Declaration of Originality

The author declares that this manuscript is original, has not been published previously, and is not under consideration in any other journal. All information, interpretations, and conclusions are the result of the author’s independent academic work.

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IMPACTO DEL VALOR DE MARCA EN LA INTENCIÓN DE COMPRA: UN ANÁLISIS DIFERENCIADO POR SEXO Y EDAD EN CERAMICS IMPORT

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Resumen

Objetivo: determinar la relación entre el valor de marca y la intención de compra de los consumidores, considerando dimensiones como la conciencia de marca, la asociación de marca, la calidad percibida y la lealtad de marca en la empresa Ceramics Import. **Metodología:** el estudio se desarrolló bajo un enfoque cuantitativo, con un diseño transversal y de tipo no experimental. Se recopiló información mediante encuestas aplicadas a una muestra de cuatrocientos cincuenta clientes de la empresa, seleccionados mediante un muestreo no probabilístico por conveniencia. Para el análisis de los datos se utilizó el *software* estadístico SPSS (versión 27). Asimismo, se emplearon técnicas de correlación lineal múltiple y análisis de regresión para evaluar la relación entre las variables. **Resultados:** los hallazgos evidencian la relevancia de construir y sostener un valor de marca sólido como factor clave en la decisión de compra del consumidor. La correlación más fuerte se observó entre el valor de marca total y la intención de compra (r = ,573). El análisis por sexo indica que tanto la conciencia como la asociación de marca son significativas en hombres y en mujeres. Además, la segmentación por edad muestra que la asociación de marca resulta significativa en todos los grupos etarios y es más influyente en consumidores mayores de cuarenta y cinco años. **Conclusión:** la asociación de marca y el valor de marca, en general, se consolidan como los principales predictores de la intención de compra con efectos consistentes, independientemente del sexo o la edad. **Originalidad / valor:** este estudio aporta evidencia empírica valiosa para la formulación de estrategias de *marketing* orientadas a fortalecer el posicionamiento y la preferencia de marca, lo que facilita la toma de decisiones más eficaces en contextos competitivos.

Palabras clave: asociación de marca, indicadores, valor de marca, calidad percibida, conciencia de marca, intención de compra, lealtad de marca
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IMPACT OF BRAND EQUITY ON PURCHASE INTENTION: A GENDER- AND AGE-DIFFERENTIATED ANALYSIS IN CERAMICS IMPORT

Abstract

Objective: This study aims to determine the relationship between brand equity and consumers' purchase intention, considering four key dimensions: brand awareness, brand association, perceived quality, and brand loyalty in the case of Ceramics Import. **Methodology:** The research followed a quantitative approach with a cross-sectional, non-experimental design. Data were collected through surveys administered to a sample of 450 customers of the company, selected using non-probability convenience sampling. Data analysis was conducted using SPSS software (version 27) along with multiple linear correlation and regression analyses to assess the relationship between the variables. **Results:** The findings highlight the importance of building and maintaining strong brand equity as a key factor in influencing consumer purchase decisions. The strongest correlation was observed between overall brand equity and purchase intention (r = .573). Gender-based analysis revealed that brand awareness and brand association are significant predictors for both men and women. Age-based segmentation further indicates that brand association is significant across all age groups, and exerts greater influence among consumers over forty-five years old. **Conclusion:** Brand association and overall brand equity emerge as the main predictors of purchase intention, showing consistent effects regardless of gender or age. **Originality / value:** This study provides valuable empirical evidence for the development of marketing strategies aimed at strengthening brand positioning and consumer preference, thereby supporting more effective decision-making in competitive contexts.

Keywords: brand association, indicators, brand equity, perceived quality, brand awareness, purchase intention, brand loyalty

1. INTRODUCCIÓN

En la dinámica actual del mercado, comprender cómo los consumidores perciben y responden ante las marcas se ha convertido en un aspecto crucial para el desarrollo de estrategias efectivas de *marketing* y la gestión del valor de marca (Gürhan-Canli et al., 2018; Ndhlovu & Maree, 2023). Este valor no solo influye en la percepción y preferencias del consumidor, sino que también puede desempeñar un rol decisivo en su intención de compra (Aaker, 1991), pues motiva a los consumidores a elegir una marca sobre otra debido a factores como la calidad percibida, la lealtad, la asociación con la marca y otros activos intangibles (Aaker, 1991; Keller, 1993). En este sentido, la intención de compra puede definirse como la probabilidad de que los consumidores seleccionen un producto o servicio específico dentro de un conjunto de alternativas (Fishbein & Ajzen, 1975).

Masa'deh et al. (2021) han demostrado que el valor de marca no solo tiene un efecto directo sobre la intención de compra, sino que también modula el impacto de otras variables, como las reseñas en línea o las recomendaciones en redes sociales. La marca es el pensamiento o la idea que tiene el consumidor acerca de la empresa; por ende, constituye la imagen formada a partir de las acciones que esta ha desarrollado (Schivinski & Dabrowski, 2014).

Esta relación puede variar según factores contextuales, por lo que el mercado peruano ofrece un escenario particularmente interesante para su análisis, debido a su diversidad cultural, económica y el rol emergente de las marcas locales y globales (Górska-Warsewicz, 2020). Investigaciones recientes han evidenciado cómo estas marcas construyen y sostienen su valor en dicho contexto (García-Salirrosas et al., 2022; Huerta-Soto et al., 2023; Leclercq-Machado et al., 2022), donde la intención de compra se ve influida por variables culturales y socioeconómicas propias de la región (Bian & Forsythe, 2012; Li et al., 2023; Ramadania et al., 2023).

La literatura científica sugiere que existen diferencias en la percepción del valor de marca según el sexo, las cuales podrían estar determinadas por roles culturales tradicionales (Lieven & Hildebrand, 2016; Yates et al., 2015). Las mujeres y los hombres tienden a valorar de forma distinta los elementos que componen el valor de marca, debido a factores como la socialización, las preferencias de consumo y las expectativas de comportamiento (Hess & Melnyk, 2016). Del mismo modo, las diferencias generacionales, también, pueden influir en la valoración del valor de marca, ya que consumidores de distintas edades poseen niveles distintos de exposición a marcas, experiencias previas y sistemas de valores (Roth-Cohen et al., 2021; Thangavel et al., 2019).

En este contexto, Ceramics Import —una empresa peruana dedicada a la importación y comercialización de productos cerámicos de alta calidad, incluyendo revestimientos, porcelanatos, sanitarios y griferías— se presenta como un caso de estudio pertinente para analizar la relación entre el valor de marca, las características demográficas y el comportamiento del consumidor. Por ello, esta investigación busca no solo generar impacto positivo en el diseño de estrategias comerciales que favorezcan el incremento de ventas y la expansión regional de la empresa, sino también fortalecer su posicionamiento competitivo a nivel nacional.

Desde una perspectiva académica, esta investigación tuvo como objetivo determinar cómo varía la influencia del valor de marca en la intención de compra según el sexo y la edad del consumidor (Husain et al., 2022) de Ceramics Import. Al realizarlo, el estudio no solo contribuye al conocimiento teórico en el campo del *marketing* y el comportamiento del consumidor, sino que también ofrece orientaciones prácticas a los profesionales del área sobre cómo adaptar sus estrategias de marca para que resuenen de manera efectiva en distintos segmentos de mercado (Cobb-Walgren et al., 1995; Rizwan et al., 2021).

2. REVISIÓN DE LITERATURA

El estudio se fundamenta en la teoría del comportamiento planificado (*theory of planned behavior*, TPB) para explorar su aplicabilidad y profundidad analítica en relación con el tema investigado. La elección de la TPB está respaldada por sólidas pruebas empíricas comprobadas y por su capacidad para desentrañar los determinantes de las intenciones de comportamiento. Se ha corroborado que la TPB ofrece un marco analítico que permite identificar y evaluar empíricamente los factores que influyen en las intenciones de compra de los consumidores (Ahmed et al., 2020; Lim & An, 2021; Liu et al., 2020; Shalender & Sharma, 2021).

La TPB, propuesta inicialmente por Ajzen (1985), actúa como una ampliación de la teoría de la acción razonada (TRA), concebida por Fishbein (1967) y refinada posteriormente por Ajzen (1991) y Fishbein y Ajzen (1975). A lo largo de las décadas, la TPB ha evolucionado para incluir variables adicionales que explican el comportamiento cuando la voluntad no es el único predictor (Pang et al., 2021; Paul et al., 2016).

La capacidad de la TPB para captar la complejidad de las intenciones de comportamiento en diversas disciplinas la convierte en una teoría ideal para analizar las intenciones de compra en el presente contexto. Además, este estudio considera la teoría de Aaker (1997), sobre el valor de marca, que se estructura en torno a cuatro dimensiones fundamentales: conciencia de marca, asociación de marca, calidad percibida y lealtad a la marca. La integración de esta teoría proporciona una comprensión holística de cómo influyen los atributos de marca en las intenciones de compra, lo que aporta una perspectiva más rica y matizada del comportamiento del consumidor. Además, esta investigación ayuda a entender cómo los consumidores perciben y se relacionan con las marcas, lo que permite diseñar estrategias de *marketing* más efectivas y evaluar el valor de la marca.

2.1 Valor de marca

De acuerdo con Aaker (1994), la noción de valor de marca se refiere al conjunto de activos y pasivos asociados a una marca —incluidos su nombre y logotipo— que añaden o restan valor al producto o servicio ofrecido desde la perspectiva de los clientes. Esta definición constituye una base para comprender cómo la percepción de la marca influye en el valor percibido por el consumidor y, en consecuencia, en la decisión de compra (Canguende-Valentim & Vale, 2023; Gandhi et al., 2023).

Un aspecto esencial del valor de marca es su capacidad para mitigar el riesgo que perciben los consumidores al adoptar nuevos productos (Kirchoff et al., 2019), ya que, al poseer una marca fuerte y digna de confianza, las empresas pueden reducir la incertidumbre asociada a la introducción de nuevas ofertas en el mercado (Cardoso et al., 2022). Además, mejora el valor percibido por el consumidor al proporcionar no solo información relevante sobre el producto, sino que también genera confianza, lo que significa mayor lealtad hacia la marca (Civelek & Ertemel, 2020).

2.2 Conciencia de marca

La conciencia de marca es el grado en que los consumidores están familiarizados con una marca y son capaces de reconocerla entre otras del mercado (Huang & Sarigöllü, 2012). Es decir, es una dimensión fundamental del valor de marca, ya que influye en la percepción y las decisiones de compra de los consumidores (Wang et al., 2023). De esta manera se engloba el reconocimiento de la marca, entendido como la capacidad de identificarse en la memoria del consumidor bajo diferentes condiciones, como el recuerdo de la marca, que es la capacidad de los consumidores de recordar el nombre de la marca y asociarlo a una categoría de productos específica sin ayuda de estímulos visuales o auditivos (Homburg et al., 2010; Keller & Swaminathan, 2020; Rossiter, 2014; Shariq, 2019).

2.3 Asociación de marca

Las asociaciones de marca representan los vínculos cognitivos y afectivos que se forman en la memoria del consumidor y que se relacionan con una marca concreta (Aaker, 1991; Belén del Río et al., 2001; Karagiorgos et al., 2023; Koll & Von Wallpach, 2014). Abarcan una amplia gama de contenidos, tales como atributos del producto, beneficios para el consumidor, experiencias del usuario y valores de marca, entre otros (Delgado-Ballester & Hernández-Espallardo, 2008; Jeon & Yoo, 2021; Pourazad et al., 2019). Son componentes críticos del valor de marca, ya que influyen en la diferenciación de marca, la preferencia del consumidor y la lealtad a la marca (Ebrahim et al., 2016; Gupta et al., 2020; Nam et al., 2011). Pueden ser tanto positivas como negativas y tienen el potencial de reforzar o debilitar el valor global de la marca en la mente de los consumidores.

2.4 Calidad percibida

La percepción de la calidad por parte de los consumidores, entendida como el juicio subjetivo sobre la excelencia y superioridad de un producto, se construye principalmente a partir de la experiencia individual de uso (Hasani et al., 2022). Diversos autores han profundizado este concepto, tales como Aakko y Niinimäki (2022), Çifci et al. (2016), Foroudi et al. (2018) y Lu et al. (2015), quienes describen la calidad percibida como un conjunto de percepciones, valoraciones intangibles y reflexiones que se forman en torno a los atributos del producto.

Según Aaker (1994), esta percepción desempeña un rol fundamental en las decisiones de compra y en la fidelidad a la marca, especialmente cuando el consumidor presenta baja motivación o carece de la capacidad necesaria para realizar un análisis exhaustivo del producto. De esta manera, la calidad percibida, en relación con el precio, puede convertirse en un diferenciador clave en la mente del consumidor: frente a productos similares, suele asumirse que un precio más elevado implica una mayor calidad, lo que puede aprovecharse estratégicamente para respaldar las estrategias de extensión de marca (Foroudi et al., 2018; Su, 2016).

2.5 Lealtad de la marca

La lealtad a la marca es una dimensión crítica del valor de marca, ya que refleja el compromiso sostenido de los consumidores y su disposición tanto a elegir como a recomendar una marca por encima de sus competidores (Cardoso et al., 2022; Mostafa & Kasamani, 2021). Esta lealtad se manifiesta a través de comportamientos de compra repetitivos y una actitud positiva hacia la marca (Jacoby & Kyner, 1973), lo que contribuye de manera significativa a la estabilidad a largo plazo y al crecimiento sostenido de los ingresos de la empresa (Cardoso et al., 2022).

2.6 Intención de compra

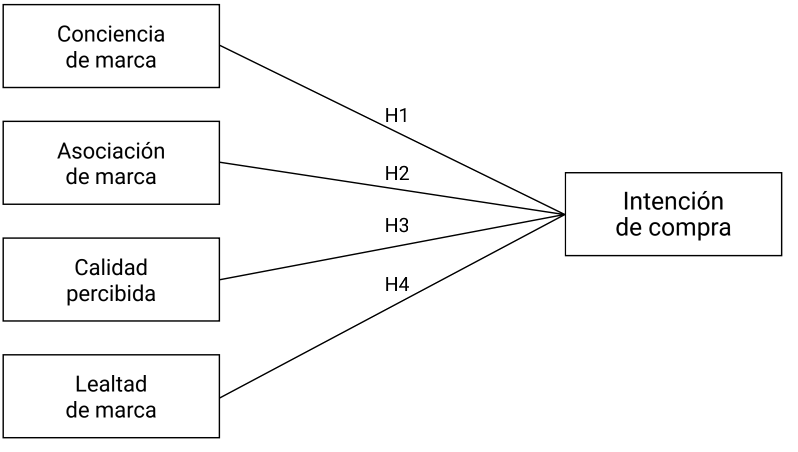
La intención de compra se concibe como un constructo que se refiere al grado de compromiso cognitivo y afectivo de un individuo hacia la adquisición de un bien o servicio específico en un periodo futuro determinado (Aliaga Fidel, 2014). Este constructo se define como un estado mental que precede a la acción de compra y que está influenciado por una serie de factores externos e internos, incluyendo las actitudes del consumidor, la percepción del producto, la influencia social, las experiencias previas de compra y las expectativas de futuro (Blanco-González et al., 2013). Desde la perspectiva del *marketing*, comprender y medir la intención de compra permite a las organizaciones desarrollar estrategias más efectivas para influir en las decisiones de compra de los consumidores, optimizar la colocación de productos y prever las tendencias de mercado (Hanaysha, 2018).

3. DESARROLLO DE LA HIPÓTESIS

Basado en la literatura revisada previamente, el marco conceptual de este estudio se presenta en la Figura 1, seguido de las hipótesis de investigación.

Figura 1

Valor de marca basado en el modelo de Aaker (1994)



3.1 Influencia entre valor de marca e intención de compra, diferenciada por sexo y edad

La relación entre el valor de marca y la intención de compra, considerando las variables demográficas de sexo y edad, constituye un área de investigación clave en el campo del *marketing*. Debido a dicha relación, aborda cómo la percepción acumulada del valor de una marca influye en las decisiones de compra de los consumidores (Wang et al., 2023). Las diferencias inherentes en las preferencias, así como las percepciones basadas en el sexo y la edad pueden modular esta relación, lo que sugiere que la construcción y la comunicación del valor de marca deben ser cuidadosamente adaptadas para resonar de manera efectiva con segmentos demográficos específicos (Lieven et al., 2015; Lieven & Hildebrand, 2016).

El estudio realizado por Nawaz et al., (2020) reveló un hallazgo importante: el valor de marca y la intención de compra varía entre diferentes grupos demográficos, especialmente en cuanto a sexo y edad. Sobre ello, se han observado diferencias significativas en cómo los hombres y las personas de mayor edad, a diferencia de las mujeres y los consumidores más jóvenes, convierten su percepción y afinidad hacia una marca en lealtad y valor percibido. Este fenómeno resalta la necesidad de adaptar las estrategias de *marketing* y comunicación de marca para abordar las expectativas, así como percepciones diversas de los consumidores según su perfil demográfico.

3.2 Influencia de la conciencia de marca en la intención de compra, diferenciada por sexo y edad

La relación entre la conciencia de marca y la intención de compra es fundamental en el comportamiento del consumidor, con diferencias notables influenciadas por el sexo y la edad. El reconocimiento y la familiaridad con una marca aumentan la probabilidad de compra (Hoyer & Brown, 1990), donde la percepción de calidad y la lealtad hacia la marca desempeñan roles significativos (Moretta Tartaglione et al., 2019). Sin embargo, esta dinámica varía entre sexos: las mujeres pueden enfocarse más en aspectos relacionales como la responsabilidad social de la marca, mientras que los hombres podrían priorizar los atributos funcionales (Karpinska-Krakowiak, 2021). Además, la edad modifica las interacciones con las marcas (Zhang et al., 2019): los consumidores más jóvenes, acostumbrados a la digitalización, se ven influenciados por las marcas a través de medios digitales y valoran la innovación, mientras que los mayores aprecian la durabilidad y la confiabilidad, con una tendencia a depender de medios tradicionales (Dobre et al., 2021).

Por su parte, Omoruyi y Chinomona (2019) investigaron la relación entre el valor percibido de la marca y la intención de compra, y destacaron el impacto de la diferenciación demográfica, particularmente en términos de sexo y edad, entre los consumidores de la provincia de Gauteng (Sudáfrica). Los resultados de este estudio evidenciaron que factores clave del valor de la marca —como estrategias publicitarias, reconocimiento de marca y atributos diferenciadores— desempeñan un rol esencial en la promoción de la intención de compra de productos o servicios.

Por otro lado, Lambert-Pandraud et al. (2017) analizaron la correlación entre el valor de marca y la intención de compra, haciendo hincapié en cómo esta relación se ve afectada por variables demográficas como el sexo y la edad de los consumidores. Utilizaron estaciones de radio como caso de estudio e identificaron tendencias distintivas que revelan variaciones significativas en la percepción y el comportamiento de compra entre distintos grupos demográficos. Se encontró un punto de inflexión en la influencia de la edad sobre la conciencia de marca alrededor de los sesenta años, lo cual sugiere diferentes implicaciones para marcas consolidadas y emergentes. Asimismo, mientras que las primeras experimentan un incremento en el valor percibido hasta alcanzar este punto crítico, las marcas más recientes enfrentan importantes desafíos para conectar con este segmento etario.

3.3 Influencia de la asociación de marca en la intención de compra, diferenciada por sexo y edad

La influencia de la asociación de marca en la intención de compra, considerando las variables de sexo y edad, representa un campo de investigación multidisciplinario que abarca la psicología del consumidor y el *marketing*. Las diferencias de sexo pueden moldear la percepción de las marcas, ya que los hombres y las mujeres pueden responder de manera distinta a los valores e imágenes que estas transmiten (Pang & Ding, 2021). Además, las prioridades y los comportamientos de compra varían significativamente según la edad: las generaciones más jóvenes suelen inclinarse por marcas que reflejan principios éticos y sostenibilidad, mientras que las generaciones mayores tienden a preferir aquellas marcas que evocan nostalgia (McKercher, 2023). La interacción entre sexo y edad ofrece una capa adicional de complejidad, lo que sugiere que las estrategias de *marketing* deben ser cuidadosamente segmentadas para resonar eficazmente con diversos grupos demográficos (Alalawneh et al., 2022).

Los resultados del estudio de Koll y Von Wallpach (2014) demostraron que los consumidores con vínculos sólidos hacia una marca tienden a tener actitudes más positivas hacia esa marca. Esto indica que existe una relación directa entre la percepción de valor de una marca y la probabilidad de que el consumidor tenga la intención de adquirirla. En consecuencia, se destaca la importancia fundamental que tienen las asociaciones de marca en la conformación de las actitudes y comportamientos del consumidor.

Por su parte, Chen et al. (2012) concluyeron que el valor de marca influye en la intención de compra, con especial énfasis en las variables demográficas de sexo y edad. Mediante un análisis detallado, se examinaron componentes del valor de marca —tales como la lealtad, percepción de calidad, asociaciones de marca y conciencia— y su impacto en distintos segmentos demográficos. Los resultados indicaron que la relación entre el valor de marca y la intención de compra no es uniforme, sino que varía de manera significativa entre los diferentes grupos demográficos, lo que destaca la influencia diferencial del sexo y la edad en la percepción del valor de marca.

3.4 Influencia entre calidad percibida e intención de compra, diferenciada por sexo y edad

La relación entre la calidad percibida y la intención de compra se ve moderada por variables demográficas. Diversos estudios han encontrado que los hombres tienden a priorizar aspectos técnicos y de rendimiento en su evaluación de la calidad, mientras que las mujeres suelen valorar más la estética y la funcionalidad (Sobieraj & Krämer, 2020). Asimismo, la edad introduce otra dimensión relevante: los consumidores más jóvenes tienden a asociar la innovación y la sostenibilidad con la calidad, mientras que los grupos de mayor edad se enfocan más en la durabilidad y la confiabilidad del producto (Kabacińska et al., 2023; Maier et al., 2020). Estos hallazgos sugieren que la percepción de calidad y la intención de compra pueden variar significativamente en función del sexo y la edad de los consumidores.

Por su parte, Hanslim et al. (2020) determinaron una relación significativa entre la percepción de calidad de productos o servicios y la intención de compra. Esta correlación se ve mediada por la participación de los consumidores en eventos específicos, que resultan ser herramientas clave en las estrategias de *marketing* para fomentar el interés de compra.

Asimismo, Xue et al. (2020) examinaron las diferencias demográficas en la percepción y respuesta a estos factores, e identificaron variaciones significativas. Notablemente, hallaron que la percepción de calidez de una marca influye significativamente en la intención de compra de las mujeres, un efecto que no se observa en los hombres. Por otro lado, en el estudio de Tansil y Tielung (2014), se exploró la interacción entre calidad percibida y precio, y se concluyó que la percepción de calidad tiene un mayor y más constante impacto en la intención de compra que el precio. Esto destaca la calidad percibida como un factor decisivo en la formación de la intención de compra.

3.5 Influencia entre lealtad de marca e intención de compra, diferenciada por sexo y edad

Según diversos estudios, por un lado, se ha observado que los hombres tienden a priorizar aspectos funcionales como la calidad y la durabilidad en su lealtad hacia las marcas, mientras que las mujeres se inclinan más hacia una conexión emocional y la identidad de marca, factores que afectan sus decisiones de compra (Loureiro et al., 2012; Nawaz et al., 2020). Por otro lado, la población joven, especialmente los pertenecientes a la generación milenial y a la generación Z, valoran la innovación, la autenticidad y la responsabilidad social de las marcas, elementos que configuran su lealtad y preferencias de compra de manera diferente en comparación con las generaciones mayores, como la generación X y los *baby boomers*, quienes tienden a favorecer la consistencia y la confiabilidad (Campagna et al., 2023; Whalen et al., 2023).

El estudio de Nawaz et al. (2020) proporcionó evidencia empírica sobre la importancia del afecto hacia la marca como un antecedente clave para la lealtad y el valor percibido de la marca. Además, se han señalado variaciones según las características demográficas de los consumidores (Muñoz, 2020). Por ello, es importante considerar la satisfacción y la calidad para la creación de valor en los clientes sobre los productos o servicios brindados por una entidad, ya que influye en la lealtad de los clientes hacia la empresa, por lo que estará presente su relevancia (Vera-Reino et al., 2022). Los clientes leales tienden a realizar compras repetitivas y realizar recomendaciones de la marca a otros y esto genera un incremento en la intensión de compra.

Asimismo, Srivastava (2015) profundizó en la relación entre lealtad de marca y factores demográficos y destacó cómo las marcas globales, percibidas con mayor calidad en comparación con las locales, logran una lealtad más sólida. Esto se refleja en comportamientos concretos, como la mayor frecuencia de compra y la disposición a recomendar la marca, de lo que se subraya el impacto del boca a boca como un canal de promoción efectivo.

4. METODOLOGÍA

Este estudio sigue un enfoque cuantitativo con un diseño transversal y no experimental, centrado en investigar las correlaciones entre fenómenos observados (Clark et al., 2021; Singh, 2022). Por ende, se enfatiza que la investigación tuvo una aprobación del Comité de Ética e Integridad de la Universidad Peruana Unión.

4.1 Población

La población de estudio fue la base de clientes de Ceramics Import (cinco mil clientes activos) y la muestra fue seleccionada utilizando un muestreo probabilístico aleatorio simple y calculando un tamaño de muestra de cuatrocientos cincuenta clientes con un nivel de confianza del 95 % y un margen de error del 5 %. La ecuación utilizada fue la siguiente:

$$n = (Z^2 * p * q) / E^2$$

Donde:

n = tamaño de la muestra.

Z = nivel de confianza (corresponde al valor crítico de la distribución normal estándar que se utiliza para calcular el intervalo de confianza).

p = proporción estimada de la población con una característica específica (si no se conoce, se puede asumir 0,5 para maximizar la muestra).

q = (1 - p).

E = margen de error permitido.

En lo que respecta a la variable edad, el análisis de la distribución demográfica de los clientes reveló una predominancia en el grupo etario superior a 36 años, lo que constituye el 43,6 % del total de la muestra. Este segmento fue seguido por el grupo de 23 a 28 años, que representa el 18 % de los clientes, lo que indica una concentración significativa en los extremos de la distribución etaria.

En cuanto a la composición por sexo, los resultados evidenciaron una ligera prevalencia de clientes de sexo masculino, quienes conforman el 52,7 % del total, en contraste del 47,3 % de clientes de sexo femenino. Este equilibrio casi paritario en la distribución de sexo sugiere una representatividad relativamente equilibrada entre los participantes masculinos y femeninos en la muestra.

4.2 Instrumentos

Se utilizó un instrumento basado en el modelo de valor de marca de Aaker (1992), los cuales fueron traducidos y adaptados para su aplicación en el presente estudio, con 29 ítems distribuidos en cinco escalas (α = ,97). Los ítems fueron evaluados en una escala de Likert de 5 puntos (1 = totalmente en desacuerdo; 5 = totalmente de acuerdo) y se controlaron variables como el sexo y la edad.

4.3 Análisis de datos

Para la recolección de los datos se presentó una solicitud a la empresa Ceramics Import, dirigida a la gerencia, para acceder a la base de datos de clientes, que registraba un total de 5000 clientes activos al cierre del 2022. Con el objetivo de asegurar la representatividad de la muestra y la garantizar la generalización de los resultados, se optó por un muestreo probabilístico aleatorio simple, lo que permitió que cada miembro de la población tuviera la misma probabilidad de ser seleccionado. Asimismo, se obtuvo una repuesta positiva de la empresa para el uso de la base de datos, lo que aseguró la confiabilidad y veracidad de la información.

Para el análisis de los datos, se utilizó la versión 27 del *software* Statistical Package for the Social Sciences (SPSS). El enfoque principal fue la correlación lineal múltiple, seleccionada por su capacidad para explorar relaciones entre múltiples variables independientes y una variable dependiente. En este caso, se analizaron cuatro dimensiones del valor de marca (valor percibido, lealtad, conocimiento y asociación de la marca) en relación con la intención de compra.

Inicialmente, se evaluó la fiabilidad de los ítems del instrumento de recolección de datos mediante el cálculo del coeficiente alfa de Cronbach. Posteriormente, se implementó el análisis de regresión lineal múltiple (Uyanık & Güler, 2013), con el que se realizó la prueba de normalidad para determinar la distribución de los datos y relacionar las variables. La regresión lineal múltiple permite evaluar el grado en el que las variables independientes (las cuatro dimensiones del valor de marca) predicen o explican la variable dependiente (intención de compra). De igual manera, para estudiar la relación lineal entre dos variables continuas, necesitamos parámetros que la cuantifiquen. La covarianza es uno de estos parámetros, el cual indica el grado de variación conjunta de dos variables aleatorias (Amat Rodrigo, 2016).

5. RESULTADOS

5.1 Resultados descriptivos

De acuerdo con la Tabla 1, en cuanto a la edad, la distribución muestra que la mayoría de los participantes tienen más de 36 años (43,6 %), seguido por aquellos en el rango de edad entre 23 a 28 años (18 %). Por otro lado, en cuanto al sexo, hay una ligera mayoría de participantes masculinos (52,7 %) en comparación con los participantes femeninos (47,3 %). Estos datos sugieren una diversidad en la muestra en términos de edad y una proporción cercana de sexo entre los participantes.

Tabla 1

Características demográficas de la población de estudio

Variable	Categoría	Frecuencia	Porcentaje
Edad (años)	18-22	57	12,7
	23-28	81	18,0
	29-35	53	11,8
	36-45	63	14,0
	Más de 46	196	43,6
Sexo	Masculino	237	52,7
	Femenino	213	47,3
	Total	450	100,0

La Tabla 2 muestra que hay una predominancia de un nivel medio de valor de marca en la población estudiada, con un 63,1 % de los participantes clasificados en esta categoría, mientras que un 36,9 % muestra un nivel alto de valor de marca. En cuanto a la conciencia de marca, se ha constatado que un 67,6 % de los encuestados tiene una percepción media en contraste con el 30,4 % que tiene una elevada conciencia de marca. En relación con la asociación de marca, se observa que una amplia mayoría (86,2 %) mantiene una asociación de nivel medio con la marca, mientras que un 13,3 % muestra una asociación de nivel alto.

Tabla 2

Análisis descriptivo de las variables

Variable	Categoría	Frecuencia	Porcentaje
Valor de marca	Bajo	0	0,0
	Medio	284	63,1
	Alto	166	36,9
Conciencia de marca	Baja	9	2,0
	Media	304	67,6
	Alta	137	30,4
Asociación de marca	Baja	2	0,4
	Media	388	86,2
	Alta	60	13,3
Calidad percibida	Baja	1	0,2
	Media	330	73,3
	Alta	119	26,4

(*continúa*)

(*continuación*)

Variable	Categoría	Frecuencia	Porcentaje
Lealtad de la marca	Baja	1	0,2
	Media	294	65,3
	Alta	155	34,4
Intención de compra	Baja	0	0,0
	Media	223	49,6
	Alta	227	50,4
	Total	450	100,0

Por otro lado, la calidad percibida es calificada como media por el 73,3 % de los participantes, mientras que un 26,4 % la considera alta. La lealtad hacia la marca se observa mayoritariamente en un nivel medio (65,3 %), aunque un 34,4 % significativo de los encuestados muestra una alta lealtad hacia la marca. En lo que respecta a la intención de compra, existe una distribución casi equitativa, con un 49,6 % de los participantes indicando una intención de compra media y un 50,4 %, lo que expresa una intención de compra alta.

5.2 Resultados correlacionales

En la Tabla 3, se ha identificado una relación significativa y más relevante (r = ,573; $p < 0{,}001$) entre el valor de marca y la intención de compra. Esto ha evidenciado una correlación positiva y fuerte entre la percepción de la marca por parte de los clientes y su disposición a adquirir productos o servicios de la marca.

Tabla 3

Análisis de correlación entre las variables y dimensiones

Variable	Intención de compra	
	r	*p*
Valor de marca	,573**	0,001
Conciencia de marca	,463**	0,001
Asociación de marca	,488**	0,001
Calidad percibida	,444**	0,001
Lealtad de la marca	,390**	0,001

Asimismo, podemos decir que la relación menos significativa o baja que se ha encontrado es una correlación (lealtad de marca = ,390; $p < 0{,}001$) entre la lealtad de la marca y la intención de compra, lo que sugiere que la fidelidad de los consumidores hacia una marca, en cuanto a su disposición a comprar de manera repetida sus productos o servicios, se relaciona positivamente con su intención de compra.

5.3 Resultados de regresión

El análisis estadístico muestra que, en ambos sexos, la conciencia de marca, la asociación de marca y la calidad percibida tienen un impacto positivo significativo en la intención de compra, como lo demuestran los coeficientes con valores de p menores a 0,05. Esto indica que hay una ligera inclinación de las mujeres a ser más leales a la marca, aunque no es lo suficientemente fuerte como para concluir que la lealtad de marca es un factor definitivo para todas las clientas. Este hallazgo muestra la complejidad de las dinámicas de sexo en el *marketing* y recomienda la necesidad de elaborar estrategias diferenciadas que consideren estas variaciones en las respuestas a los componentes de la marca.

En la Tabla 4, se presentan los resultados de modelos de regresión lineal ajustada para los sexos masculino y femenino con respecto a la intención de compra. Para ello, se utilizaron variables independientes como la conciencia de marca, asociación de marca, calidad percibida y lealtad de la marca. Para el sexo masculino, el modelo ajustado muestra un coeficiente de determinación (R2 ajustado) de 0,41, mientras que para el sexo femenino es de 0,36. En ambos casos, las variables independientes tienen coeficientes significativos ($p < 0,05$), lo que indica que la conciencia de marca, asociación de marca y calidad percibida tienen un impacto positivo en la intención de compra. Sin embargo, la lealtad de la marca no es significativa para el sexo masculino, mientras que para el femenino muestra cierta significancia marginal ($p = 0,118$). Esto sugiere que las estrategias de *marketing* centradas en la conciencia y asociación de marca, junto con la calidad percibida, pueden ser más efectivas en influir en la intención de compra, especialmente para el sexo masculino.

Tabla 4

Coeficiente de regresión múltiple de las variables sobre la intención de compra por sexo

	Masculino Modelo: R2 ajustado = ,41			Femenino Modelo: R2 ajustado = ,36		
Variables independientes	Coeficientes no estandarizados *R* = correlación	t de *student*	Sig.	Coeficientes no estandarizados *R* = correlación significativa	t de *student*	Sig.
(Constante)	6,35	8,30	0,001	5,57	6,11	0,001
Conciencia de marca	0,12	4,38	0,001	0,08	2,65	0,009
Asociación de marca	0,17	3,21	0,002	0,28	4,25	0,001
Calidad percibida	0,15	4,24	0,000	0,12	2,39	0,018
Lealtad de la marca	0,04	1,04	0,299	0,07	1,57	0,118

Variable dependiente: intención de compra.

Predictores: (constante), lealtad de la marca, conciencia de marca, calidad percibida, asociación de marca.

En la Tabla 5, se muestra que la conciencia de marca impacta positivamente la intención de compra en los grupos de 18 a 22, 23 a 28 y mayores de 45 años, mientras que la asociación de marca es significativa para todos los grupos, excepto para los consumidores de 36 a 45 años. La percepción de calidad es relevante para los grupos de 23 a 28, 36 a 45 y mayores de 45 años. Esto indica que la percepción del producto desempeña un rol clave en estos segmentos. Por otro lado, la lealtad de marca solo tiene un efecto significativo en los consumidores mayores de 45 años.

Tabla 5

Coeficiente de regresión múltiple de las variables sobre la intención de compra por edades

	Entre 18 a 22 Modelo: R2 ajustado = ,42			Entre 23 a 28 Modelo: R2 ajustado = ,41			Entre 29 a 35 Modelo: R2 ajustado = ,33			Entre 36 a 45 Modelo: R2 ajustado = ,36			Más de 45 años Modelo: R2 ajustado = ,38		
Variables independientes	Coef no est.	t de *student*	Sig.	Coef no est.	t de *student*	Sig.	Coef no est.	t de *student*	Sig.	Coef no est.	t de *student*	Sig.	Coef no est.	t de *student*	Sig.
	R			R			R			R			R		
(Constante)	7,31	5,11	0,001	6,28	4,71	0,001	8,73	5,86	0,001	4,54	2,45	0,017	5,30	5,65	0,001
Conciencia de marca	0,14	3,15	0,003	0,14	2,90	0,005	-0,03	-0,51	0,615	0,06	0,94	0,349	0,12	3,46	0,001
Asociación de marca	0,21	2,33	0,024	0,24	2,57	0,012	0,31	2,91	0,005	0,26	2,07	0,043	0,19	2,82	0,005
Calidad percibida	0,10	1,50	0,139	0,15	2,12	0,037	0,14	1,82	0,075	0,18	2,30	0,025	0,11	2,49	0,014
Lealtad de la marca	-0,02	-0,25	0,807	-0,03	-0,45	0,655	0,01	0,19	0,848	0,11	1,35	0,182	0,10	2,12	0,035

Variable dependiente: intención de compra.

Predictores: (constante), lealtad de la marca, asociación de marca, conciencia de marca, calidad percibida.

6. DISCUSIÓN

En el estudio sobre la relación entre el valor de marca y la intención de compra, se encontró que un 63,1 % de percepción de marca en la muestra refleja una comprensión sólida de la imagen de marca en la mente del consumidor. Además, se identificó una correlación positiva significativa (r = ,573; p < ,001) entre el valor de marca y la intención de compra, por lo que se ha evidenciado la influencia de una percepción de marca sólida en la disposición de los consumidores a realizar compras. Este hallazgo es coherente con la investigación de Nawaz et al. (2020), quienes destacan el rol crucial del valor de marca en la intención de compra. Asimismo, como mencionan Blanco-González et al. (2013), el consumidor se encuentra influenciado por una serie de factores externos e internos, incluyendo las actitudes del consumidor, la percepción del producto, la influencia social, las experiencias previas de compra y las expectativas de futuro.

Asimismo, los resultados de este estudio subrayan el rol fundamental de la conciencia de marca en la intención de compra. El 67,6 % de los participantes reconocen una familiaridad con una marca específica, lo cual influye positivamente en sus actitudes y decisiones de compra. La correlación moderada entre la conciencia de marca y la intención de compra (r = ,463; p < ,001) confirma que la capacidad de los consumidores para identificar y recordar una marca es un factor relevante en su disposición para adquirir productos o servicios, consistente con investigaciones previas (Omoruyi & Chinomona, 2019). Este impacto es significativo tanto en hombres (coeficiente. = 0,12; p = 0,001) como en mujeres (coeficiente. = 0,08; p = 0,009), aunque es más pronunciado en los hombres. La variabilidad observada sugiere posibles diferencias en los factores motivacionales entre sexos, lo que plantea oportunidades para explorar estrategias de *marketing* personalizadas. Además, la conciencia de marca muestra un impacto considerable en varios grupos etarios, en particular, en personas de 18 a 22, 23 a 28 y mayores de 45 años, de lo que destaca la necesidad de adaptar los esfuerzos del valor de marca a segmentos de edad específicos.

La prevalencia de asociaciones de marca, indicada por un 86,2 % de los encuestados, refuerza la profunda integración de estas asociaciones en el comportamiento del consumidor. Esta potente presencia de asociaciones apoya la teoría de que vínculos sólidos entre marca y consumidor son fundamentales para la construcción de valor de marca (Koll & Von Wallpach, 2014). Así, la correlación moderada entre las asociaciones de marca y la intención de compra (r = ,488; p < 0,001) enfatiza la influencia significativa de estos vínculos en la probabilidad de compra. Estos resultados concuerdan con estudios como el de Chen et al. (2012), quienes encontraron variaciones en la influencia de los componentes del valor de marca según los segmentos demográficos. Es interesante notar que, si bien las asociaciones de marca tienen un impacto significativo tanto en hombres (coeficiente. = 0,17; p = 0,002) como en mujeres (coeficiente. = 0,28; p = 0,001), este efecto es más marcado en mujeres. Este hallazgo sugiere que, para este grupo, las asociaciones positivas con la marca constituyen un factor determinante para la intención de compra. Sin embargo, las asociaciones de marca son menos significativas en el grupo etario de 36 a 45 años, lo que indica posibles diferencias generacionales en la percepción de las marcas.

La percepción de calidad se presenta como otro componente crucial del valor de marca. El 73,3 % de los encuestados reporta una evaluación positiva de la calidad, lo que se correlaciona de manera moderada con la intención de compra (r = ,444; p < ,001). Esto sugiere que la percepción de calidad no solo afecta la lealtad, sino que también incide directamente en la intención de compra, tal como lo han señalado otros estudios (Hanslim et al., 2020). La percepción de calidad ejerce un efecto positivo y significativo sobre la intención de compra tanto en hombres (coeficiente. = 0,15; p < 0,001) como en mujeres (coeficiente. = 0,12; p = 0,018). Esta relación se manifiesta particularmente en los grupos etarios de 23 a 28, 36 a 45, y mayores de 45 años, lo que sugiere que la calidad percibida es un factor relevante a lo largo del ciclo de vida del consumidor. Este hallazgo es consistente con estudios anteriores que demuestran que la percepción de calidad impacta la credibilidad de la marca y puede influir en la intención de compra (Yoo & Donthu, 2001). Dicha postura se complementa con el estudio de Xue et al. (2020), en el que se examinan las diferencias demográficas en la percepción y respuesta a estos factores, y se identifican variaciones significativas.

La relación entre lealtad de marca e intención de compra se presenta de manera diferente a lo anticipado. Aunque el 65,5 % de los encuestados expresa lealtad a la marca, su correlación con la intención de compra es moderada (r = ,390; p < ,001), por lo que destaca su influencia en la disposición a comprar. No obstante, la lealtad no muestra un impacto significativo en la intención de compra ni para hombres (coeficiente. = 0,04; p = 0,299) ni para mujeres (coeficiente. = 0,07; p = 0,118), ya que ambos resultados no alcanzan la significancia estadística (p > 0,05).

Este hallazgo contrasta parcialmente con investigaciones previas que señalan a la lealtad de marca como un factor clave para la intención de compra (Aaker, 1997). A diferencia del estudio realizado por Loureiro et al. (2012), en el estudio de Nawaz et al. (2020), se evidencia que los hombres tienden a priorizar aspectos funcionales como la calidad y la durabilidad en su lealtad hacia las marcas, mientras que las mujeres se inclinan más hacia una conexión emocional y la identidad de marca (factores que afectan sus decisiones de compra). Dicho esto, se entiende que la falta de significancia sugiere que, en este contexto específico, la lealtad no actúa como un factor determinante en la intención de compra para consumidores más jóvenes, pero sí parece tener un papel más destacado entre los consumidores mayores de 45 años, lo que podría estar asociado a una mayor valoración de la estabilidad y confianza en marcas reconocidas.

7. LIMITACIONES

Esta investigación presenta varias limitaciones que deben ser consideradas al interpretar sus resultados. En primer lugar, el estudio se basó en un único caso empresarial, lo que restringe la generalización de los hallazgos a otros contextos o sectores. En segundo lugar, la disponibilidad de información sobre el valor de marca en el mercado local fue limitada, porque se trata de un tema de investigación aún emergente en la región. Esto obligó a complementar la revisión teórica con literatura extranjera, cuya aplicabilidad al contexto peruano puede tener restricciones. En tercer lugar, algunos de los estudios utilizados como base teórica estaban desactualizados o no contaban con evidencia empírica reciente, lo que pudo afectar la solidez del marco conceptual. En cuarto lugar, el proceso de recolección de datos enfrentó limitaciones derivadas del acceso restringido a información demográfica precisa de los consumidores, lo que dificultó segmentar adecuadamente por sexo y edad. Por último, se identificaron desafíos durante la aplicación de las encuestas, tales como la falta de interés o comprensión por parte de los encuestados, lo que pudo haber influido en la calidad y profundidad de las respuestas obtenidas.

8. FUTURAS LÍNEAS DE INVESTIGACIÓN

A partir de los hallazgos obtenidos en esta investigación, se han identificado diversas líneas que pueden orientar futuras investigaciones en el campo del valor de marca y el comportamiento del consumidor. Una de ellas consiste en extender el análisis a distintos sectores o industrias para comparar el impacto del valor de marca en la intención de compra más allá del rubro cerámico abordado en este estudio. Asimismo, sería valioso evaluar la efectividad de nuevas estrategias de *branding* centradas en el fortalecimiento de la conciencia de marca.

Otra línea de investigación relevante implica explorar cómo las redes sociales, la inteligencia artificial y el *marketing* de *influencers* influyen en la percepción de marca y en la lealtad del cliente. Del mismo modo, se sugiere analizar el impacto de la responsabilidad social corporativa y las prácticas sostenibles en la construcción del valor de marca y en la toma de decisiones del consumidor. También sería pertinente estudiar cómo las marcas pueden proteger y mantener su valor durante contextos de crisis, mediante estrategias de comunicación efectivas y una gestión adecuada de la reputación. Finalmente, se plantea la necesidad de desarrollar nuevas métricas más precisas y actualizadas para medir el valor de marca, incorporando metodologías cualitativas y enfoques basados en datos para responder a los desafíos de un entorno empresarial cada vez más dinámico.

9. CONTRIBUCIONES TEÓRICAS

El presente estudio enfatiza importantes teorías sobre el valor de marca y sus dimensiones, ya que representa el valor que una marca aporta a sus productos o servicios, por lo que el desarrollo constante y eficaz del valor de marca proporciona resultados positivos, tales como el incremento de ventas, competitividad entre otros, aumento del valor de la empresa, etcétera. En esa línea, las teorías resaltan que el valor de marca es crucial para las organizaciones, ya que influye positivamente en la intensión de marca. Por ello, las evidencias aportadas en este estudio, que son poco estudiadas y profundizadas dentro de la investigación científica, son de mucha ayuda para las organizaciones a la hora de desarrollar o implementar estrategias favorables.

10. CONTRIBUCIONES PRÁCTICAS

Nuestro estudio facilita perspectivas prácticas para las pequeñas y grandes empresas peruanas sobre cómo mejorar o implementar el valor de marca y resalta la importancia de sus dimensiones dentro del valor de marca. En este sentido, resulta de mucho interés establecer una conexión positiva con los clientes a través de la calidad, la consistencia y la comunicación efectiva. Esto implica entender a profundidad las necesidades del cliente y ofrecer productos o servicios de buena calidad para el desarrollo de una marca firme en el mercado. Por último, es relevante medir el valor de la marca en la intensión de compra y sus dimensiones (conciencia de marca, asociación de marca, calidad percibida y lealtad de marca) para la implementación de estrategias elocuentes y mantener la relevancia empresarial.

11. CONCLUSIONES

Este estudio nos proporciona evidencia que confirma la influencia del valor de marca medido a través de sus distintas dimensiones. En primer lugar, la conciencia de marca es un predictor significativo de la intención de compra. De igual modo, las asociaciones de marca muestran una relación positiva y sólida con dicha intención. En cuanto a la intención de compra, la calidad percibida emerge como una variable crítica que incide directamente en la intención de compra. Asimismo, la lealtad de marca es un factor más consolidado en grupos de mayor edad, mientras que en los más jóvenes aún no representa un determinante fuerte con respecto a su influencia en la intención de compra.

En consecuencia, las estrategias de *marketing* deberían considerar estos comportamientos diferenciados con respecto al sexo y edad de los consumidores, e incorporar acciones específicas para fomentar la conciencia de marca, asociación de marca, calidad percibida y lealtad de marca en los segmentos donde actualmente no tienen un peso significativo. Finalmente, estos hallazgos enfatizan la importancia del estudio de cada una de las dimensiones y como estas influencian y son factores clave en la intención de compra del consumidor. Comprender estos hallazgos forma parte fundamental para una construcción sólida del valor de marca.

DECLARACIONES

Disponibilidad de datos

Los datos utilizados y analizados durante el desarrollo de este estudio no están disponibles públicamente, pero pueden ser solicitados al autor correspondiente.

Uso de inteligencia artificial

No se ha utilizado inteligencia artificial para la redacción, análisis o generación de contenidos en este manuscrito.

Conflicto de intereses

Los autores declaran que no existen conflictos de interés relacionados con la elaboración y publicación de este artículo.

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MML: conceptualización, revisión de literatura, metodología, recolección de datos, redacción y revisión final.

HHG: conceptualización, revisión de literatura, análisis de resultados, redacción y edición.

AHR: conceptualización, metodología, recolección de datos, análisis estadístico, revisión del manuscrito.

Aprobación ética

No aplicable.

Declaración de originalidad

Los autores declaran que este manuscrito es original, no ha sido publicado previamente ni se encuentra en revisión en otra revista. Todos los datos, resultados y conclusiones son producto de su propio trabajo de investigación.

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EL ROL DE LAS DENOMINACIONES DE ORIGEN EN LA ACTIVIDAD EXPORTADORA DE LAS BODEGAS: EL CASO DE ESPAÑA

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Resumen

Objetivo: este estudio examina cómo la afiliación a una denominación de origen (DO) influye en el desempeño exportador de las bodegas españolas, centrándose en el papel institucional que desempeñan los consejos reguladores en la promoción internacional del vino, una dimensión poco explorada en la literatura. **Metodología:** se realizaron dos encuestas a nivel nacional. Una estuvo dirigida a los 70 consejos reguladores existentes en España; la otra, a 687 bodegas adscritas a dichas DO. Se construyó un índice de apoyo a la internacionalización basado en tres dimensiones clave: logística, innovación y formación. Los consejos fueron clasificados según su nivel de apoyo para evaluar su impacto en el valor de las exportaciones. **Resultados:** surgieron dos perfiles institucionales claramente diferenciados: apoyo de alta y baja intensidad. En los consejos de baja intensidad, se observa una relación positiva entre la pertenencia a una DO y el valor exportador. En los de alta intensidad, la relación es más compleja, lo que sugiere la existencia de factores moderadores aún no analizados. Las actividades logísticas y de apoyo promocional resultaron ser las más frecuentes e impactantes. **Originalidad/valor:** este estudio ofrece aportes novedosos al vincular el desempeño exportador de las bodegas no solo con el prestigio de su DO, sino también con las acciones institucionales estratégicas de los consejos reguladores. Contribuye a una comprensión más amplia de cómo la gobernanza colectiva y las políticas públicas configuran la competitividad internacional en el sector agroalimentario.

Palabras clave: exportación, denominación de origen, actividad de apoyo, consejo regulador
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THE INFLUENCE OF APPELLATIONS OF ORIGIN ON WINE EXPORTS: THE CASE OF SPAIN

Abstract

Purpose: This study examines how affiliation with a Designation of Origin (DO) influences the export performance of Spanish wineries, focusing on the institutional role of Regulatory Councils in international wine promotion, an underexplored dimension in the literature. **Methodology:** Two nationwide surveys were conducted: one targeting all 70 Regulatory Councils in Spain, and another involving 687 wineries affiliated with these DOs. An internationalization support index was developed based on three key dimensions: logistics, innovation, and training. Councils were classified by their level of support to assess the impact on export value. **Findings:** Two distinct institutional profiles emerged: high- and low-intensity support. In low-intensity Councils, a positive relationship is observed between DO membership and export value. In high-intensity cases, the relationship is more complex, suggesting the presence of moderating factors yet to be explored. Logistics and promotional support activities were found to be the most prevalent and impactful. **Originality/value:** This study provides novel insights by linking wineries' export performance not only to the reputation of their DO, but also to the strategic institutional actions of Regulatory Councils. It contributes to the broader understanding of how collective governance and public policy shape international competitiveness in the agri-food sector.

Keywords: export, appellation of origin, support activity, regulatory council

1. INTRODUCCIÓN

En los últimos años, y especialmente en la actualidad, somos conscientes del alto grado de globalización que caracteriza al mundo en el que vivimos y que afecta a todos los ámbitos de nuestra vida. Por ello, las personas, y por ende las empresas, requieren una capacidad exportadora para garantizar su supervivencia y poder competir en entornos tan cambiantes.

En este proceso de expansión hacia mercados internacionales, el sector agroalimentario de España, y más específicamente su sector vitivinícola, no es una excepción. La industria vitivinícola española es un sector económicamente relevante en términos del valor añadido que genera y el número de empleos que proporciona (Sellers-Rubio, 2010). Por ejemplo, en el 2010, el sector representó el 6,5 % del empleo y el 7,9 % del valor añadido bruto total de la industria agroalimentaria española (Ministerio de Agricultura, Alimentación y Medio Ambiente, 2012).

Además, en general, el sector vitivinícola tiene una marcada proyección internacional debido, principalmente, a la evolución de la demanda y a la alta competencia de las empresas nacionales como internacionales. En los últimos años, han surgido nuevos países productores de vino que emplean estrategias innovadoras de producción y comercialización para captar una creciente cuota del comercio mundial. El aumento de la producción de los llamados países productores de vino del nuevo mundo (principalmente Australia, Chile, Estados Unidos, Sudáfrica y Argentina) ha traído consigo la utilización de estrategias de exportación basadas en una marca fuerte y productos relativamente homogéneos, de alta calidad y precios competitivos (Chambolle & Giraud-Héraud, 2003), dirigidos a satisfacer los crecientes niveles de consumo global, cada vez más orientado a productos de calidad. Estos nuevos productores mundiales han reforzado sus inversiones en promoción, tecnología e innovación (Campbell & Guibert, 2006; Roberto, 2003), lo cual ha desembocado en un gran aumento de la competencia y ha obligado a países como España a fortalecer sus esfuerzos de exportación (Castaldi et al., 2004; Duarte Alonso & Liu, 2012) y a enfrentarse a las grandes dificultades que conlleva este proceso de apertura de mercados.

En el ámbito nacional, la producción española de vino ha crecido significativamente desde la década de 1990. Sin embargo, este aumento no se ha visto acompañado por un incremento en la demanda interna, ya que el consumo doméstico ha experimentado una caída considerable, situándose en los últimos años por debajo de un tercio de la producción total (Martínez Carrión & Medina Albaladejo, 2013). Asimismo, las empresas del sector vitivinícola español se caracterizan por estar fuertemente vinculadas a su origen geográfico y a los métodos de producción tradicionales de la región, elementos identitarios que utilizan para diferenciar sus productos en el mercado (Bardají & Mili, 2011). La mayoría de las bodegas españolas son de propiedad familiar, de tamaño pequeño, fuertemente vinculadas con su territorio y centradas comercialmente en el mercado interno (Martínez Carrión & Medina Albaladejo, 2013); todo lo cual dificulta su apertura internacional.

Estos hechos han generado dos tendencias paralelas en el sector: una pérdida de cuota en el mercado nacional y un aumento de la cuota en los mercados exteriores. Esto evidencia la crisis de competitividad en la que se encuentra la industria vitivinícola española, coyuntura en la que una mayor apertura a los mercados internacionales parece la alternativa más viable para revertir la situación (Martínez Carrión & Medina Albaladejo, 2010).

Debido a la gran importancia que tienen las exportaciones en el crecimiento de las empresas y de su competitividad, en los últimos años la literatura se ha centrado en analizar los determinantes de los resultados de las exportaciones en diferentes sectores, regiones y países (Leonidou & Katsikeas, 2010; Ruppenthal & Bausch, 2009; Sousa et al., 2008). Algunos autores se han centrado en analizar la relación de una exportación exitosa con factores como el tamaño empresarial (Bilkey, 1978; Gemünden, 1991), el capital humano (Pinho & Martins, 2010), la innovación (Hirsch & Bijaoui, 1985), los anuncios (Chu & Keh, 2006) o la edad de las empresas (Majocchi et al., 2005). Además de los efectos positivos, la literatura también ha analizado los desafíos que enfrentan las empresas a la hora de exportar: el acceso a información sobre los mercados extranjeros, como regulaciones legales, requisitos y gustos de los consumidores, canales de venta o cultura empresarial; o la dificultad para conseguir una buena reputación en los nuevos mercados y obtener certificaciones de calidad.

A partir del desafío de obtener certificaciones de calidad, llama la atención un vacío en la literatura relacionada con el sector vitivinícola, el cual tiene que ver con el análisis de las certificaciones de denominación de origen (DO). Se ha analizado el efecto que tienen los recursos internos y externos de las empresas en las exportaciones, pero no se ha llevado a cabo el análisis de un recurso colectivo como es la pertenencia a una DO en el comportamiento exportador de las empresas productoras de vino.

La Unión Europea protege los productos agrícolas de excelencia a partir de un sistema de instrumentos políticos como son las denominaciones de origen protegidas y las indicaciones geográficas protegidas. Estas políticas sirven para preservar las características de los productos agrícolas que poseen factores geográficos muy determinados (plantas y variedades locales) o una particular experiencia local (métodos o procesos tradicionales). Esta protección tiene el objetivo de salvaguardar estos productos de alta calidad y servir de ayuda a los productores europeos para mantener su identidad cultural, a la par que les permite ganar rentabilidad y competitividad en el mercado globalizado en el que nos encontramos (Agostino & Trivieri, 2014). En nuestro estudio nos vamos a centrar solo en el análisis de las DO.

Desde 1960, el sistema de DO y de indicaciones geográficas se aplica también al sector vitivinícola. Para obtener estas designaciones, los vinos deben producirse en áreas específicas y cumplir con normas estrictas, como el uso de ciertas variedades de uva, métodos de producción, grado alcohólico y rendimientos máximos por hectárea, entre otros. Aunque cumplir con estos requisitos implica menor flexibilidad y mayores costes, permite a los productores beneficiarse de una reputación colectiva, así como fortalecer su marca y reconocimiento, atributos muy valorados por los consumidores en mercados internacionales (Sáenz-Navajas et al., 2010).

Aunque la utilización de las DO geográficas es de gran importancia en las políticas de calidad aplicadas por la UE, hay escasa investigación que analice la influencia de su uso en dimensiones económicas diversas, como pueden serlo las exportaciones (Bramley et al., 2009; Josling, 2006). Considerando estos hechos, este trabajo investiga si la pertenencia a una DO por parte de las principales empresas productoras de vino en España está asociada con un mayor comportamiento exportador. Así, este estudio busca enriquecer la literatura sobre competitividad internacional en el sector vitivinícola al incorporar una dimensión habitualmente subestimada: el papel institucional de los consejos reguladores y la pertenencia a una DO como factores que pueden potenciar o limitar el desempeño exportador de las bodegas. En lugar de centrarse únicamente en recursos internos, se analiza cómo los recursos colectivos y el apoyo institucional inciden en la capacidad de internacionalización. A partir de este enfoque, el estudio plantea dos preguntas clave de investigación: ¿cómo influye la pertenencia a una DO en el valor de las exportaciones de las bodegas españolas, en función del nivel de apoyo institucional recibido?, y ¿qué actividades específicas de apoyo a la internacionalización ejercen un mayor impacto en el rendimiento exportador?

2. REVISIÓN DE LITERATURA Y DESARROLLO DE HIPÓTESIS

El enfoque de recursos y capacidades ha sido uno de los marcos teóricos más consolidados y utilizados para explicar el comportamiento internacional y exportador de las empresas (Rialp et al., 2005). Este enfoque se basa en que las empresas poseen determinados recursos y capacidades, los cuales constituyen un elemento clave para alcanzar una ventaja competitiva (Barney, 1991). Los recursos se definen como todos los factores que una empresa controla y que, luego, se transforman en productos o servicios finales a través de otros activos y procesos. Por otro lado, las capacidades se desarrollan y perfeccionan con el tiempo, y emergen de las interacciones entre los recursos disponibles (Amit & Schoemaker, 1993).

No obstante, los recursos y las capacidades que posee una empresa no garantizan por sí solos la consecución de una ventaja competitiva sostenible. Para lograr dicha ventaja, se deben cumplir tres condiciones esenciales: la empresa debe establecer la ventaja competitiva, debe mantenerla en el tiempo y, por último, debe apropiarse de los beneficios que de ella derivan. Para ello, los recursos deben ser escasos, relevantes, duraderos, intransferibles y difíciles de replicar (Grant, 1987). Por tanto, a partir de este enfoque, entendemos que cada DO engloba un conjunto de recursos y capacidades en cantidades y valores variables y diferentes, dependiendo de la región de producción. Así, mientras la literatura analiza recursos individuales que pueden aportar una ventaja competitiva, en nuestro estudio vamos a analizar las DO como recursos colectivos que están formados por un conjunto de factores que varían dependiendo de la región de producción: el capital humano, la innovación, la publicidad, el tamaño y la edad (Sáenz-Navajas et al., 2010).

2.1 El capital humano en las exportaciones de vino

Según Pinho y Martins (2010), la falta de personal cualificado constituye una barrera significativa para el desarrollo de las exportaciones en las empresas. Por ello, para incrementar su participación en los mercados extranjeros, las empresas requieren aumentar el número de trabajadores implicados en la gestión de actividades internacionales. Sin embargo, no solo es necesario incrementar la cantidad de empleados, sino también que estos posean un nivel de educación superior, lo que contribuye a mejorar los procesos de toma de decisiones, fundamentales para la actividad exportadora. Estudios como el de Contractor y Mudambi (2008) destacan la importancia del nivel educativo de los empleados para alcanzar el éxito competitivo en mercados internacionales. Una educación superior facilita el análisis de nuevos contextos y el establecimiento de contactos diversos, lo que permite un mayor acceso a mercados externos (Wiersema & Bantel, 1992).

2.2 La innovación y las exportaciones de vino

Gran parte de la literatura destaca que la capacidad de una empresa para crear productos nuevos o diferentes es más importante cuando comienza a entrar en mercados extranjeros y se encuentra con mayor presión por innovar para poder competir con las empresas internacionales (Cavusgil & Zou, 1994). A partir de esta teoría, se resalta la importancia de la innovación como generadora de ventajas competitivas en las empresas. Según Rodríguez y García Rodríguez (2005), la innovación puede generar dos tipos de ventajas competitivas: por un lado, mejora la eficiencia operativa en los procesos y, por el otro, incrementa el valor del producto en la percepción del cliente mediante una mayor diferenciación. Numerosas investigaciones concluyen que la innovación cumple un gran papel en el grado de exportación de las empresas y en la diversidad de mercados en los que puede actuar. Por ejemplo, las investigaciones inciden en que las empresas innovadoras en un determinado sector tienen una mayor propensión exportadora que el promedio (Hirsch & Bijaoui, 1985), o que las innovaciones mejoran el alcance geográfico de las actividades de exportación (Belderbos et al., 2008).

2.3 La publicidad en el comportamiento exportador del sector vitivinícola

La literatura concluye que la publicidad puede mejorar el posicionamiento de una empresa en el mercado, pues la hace más competitiva y aumenta sus oportunidades de apropiación de valor (Chu & Keh, 2006). Además, en un mundo cada vez más globalizado, se considera que las empresas que invierten en publicidad logran mayores ventas en mercados extranjeros, en comparación con aquellas que no lo hacen (Kotabe et al., 2002). Diversos estudios han evidenciado que la inversión publicitaria tiene una influencia positiva significativa en la intensidad exportadora (Hoang, 1998). Asimismo, análisis empíricos revelan que las empresas con mayor intensidad publicitaria tienden a diversificarse geográficamente, debido a que poseen activos intangibles, como el reconocimiento de marca o la reputación, los cuales funcionan como bienes públicos y son fácilmente transferibles y reconocibles entre países (Davies et al., 2001; Kim & Mathur, 2008).

2.4 El tamaño y la edad del sector vitivinícola

El tamaño y la edad de las empresas constituyen dos de los factores más estudiados en la literatura sobre exportaciones (Majocchi et al., 2005; Pla-Barber & Alegre, 2007). La conclusión más extendida, basada en el enfoque de recursos, es que un mayor tamaño implica una mayor disponibilidad de recursos financieros y gerenciales, lo cual facilita la asunción de riesgos asociados a la actividad exportadora (Wagner, 1995). No obstante, algunos autores señalan que el tamaño no constituye un obstáculo para exportar; aunque la mayoría de estudios coinciden en que el tamaño tiene un impacto positivo sobre la intensidad exportadora (Wagner, 1995).

Respecto a la edad de los consejos reguladores, esta se interpreta como la experiencia acumulada en el sector. El ingreso a nuevos mercados implica enfrentarse a nuevas culturas, políticas, sistemas de distribución, idiomas y preferencias de los consumidores, por lo que autores como Majocchi et al. (2005) destacan la experiencia empresarial —un indicador de la edad— como un factor clave que impulsa la actividad exportadora. Sus estudios indican que las empresas más antiguas muestran mayor intensidad exportadora en comparación con las de reciente creación. Sin embargo, otros autores como Moen y Servais (2002) no encuentran evidencia concluyente sobre la influencia de la edad en la intensidad exportadora. Por tanto, la literatura no presenta un consenso definitivo al respecto.

A partir de esta revisión de la teoría de los recursos y las capacidades, podemos relacionar la gran variedad de comportamientos exportadores de las empresas vitivinícolas de España con la pertenencia a una determinada DO: cada una posee unos recursos y unas capacidades distintos dependiendo de la zona geográfica específica de producción.

2.5 Historia: los consejos reguladores en España

Antes de abordar el análisis del papel que desempeñan los consejos reguladores en la actividad exportadora de las bodegas españolas, resulta imprescindible comprender el concepto de DO. La figura del consejo regulador está íntimamente ligada a la existencia de las DO, ya que estas son el fundamento que justifica la creación de dichos consejos. La definición más comúnmente aceptada de DO es la estipulada en el Arreglo de Lisboa relativo a la Protección de las Denominaciones de Origen y su Registro Internacional (1979/s. f.), de 1958, el cual establece lo siguiente:

> Se entiende por denominación de origen, en el sentido del presente Arreglo, la denominación geográfica de un país, de una región o de una localidad que sirva para designar un producto originario del mismo y cuya calidad o características se deben exclusiva o esencialmente al medio geográfico, comprendidos los factores naturales y los factores humanos.
>
> El país de origen es aquel cuyo nombre constituye la denominación de origen que ha dado al producto su notoriedad o bien aquel en el cual está situada la región o la localidad cuyo nombre constituye la denominación de origen que ha dado al producto su notoriedad. (art. 2, incisos 1-2)

La anterior definición, debido a su escritura indeterminada, se aplica a todo tipo de productos de un país o región. Pero hay que destacar que el concepto de DO se originó en el sector del vino.

El inicio de la existencia del concepto de DO se remonta a comienzos de la Edad Moderna con el comercio de vinos entre diferentes regiones vitivinícolas y algunas potencias marítimas no productoras que requerían el producto. En esa época, la procedencia del vino no solo servía para identificar el origen geográfico de producción, sino también para diferenciar las variadas tipologías de vino existentes. De estas diferencias nacieron las conocidas prácticas de imitaciones fraudulentas de los vinos, lo que hizo patente la necesidad de protección de las DO a nivel internacional.

Las continuas fraudulencias llevaron a celebrar en 1878 un Congreso Internacional en París, en el cual se constituyó la Liga Internacional para la Protección Mutua de la Propiedad Industrial con la principal finalidad de preparar determinadas recomendaciones a los Estados participantes. En 1883, tuvo lugar la primera reunión de la Liga: el Convenio de París para la Protección de la Propiedad Industrial. En este, los industriales europeos representados pactaron una serie de acuerdos por los que se protegían determinados nombres geográficos y se acordaba la protección industrial de las indicaciones de procedencia o DO.

No fue hasta 1891, con la firma del denominado Acuerdo de Madrid, cuando estos acuerdos se convirtieron en normativa de derecho internacional. Desde ese momento, los países firmantes se comprometieron a reprimir los certificados falsos de origen, con lo que se consolidó el concepto de denominaciones regionales de procedencia de los productos vitícolas. A partir de entonces, los Estados europeos marcaban normas reguladoras a las DO y, en 1933 en España, se creó el llamado Estatuto del Vino, el cual protegía las DO españolas. Este estatuto reconocía oficialmente a veintiocho de ellas y otorgaba su gobierno a un respectivo órgano denominado consejo regulador. A partir de esta revisión histórica, es patente la estrecha e inseparable relación entre la DO y su consejo regulador. Este último es el organismo encargado de la gestión, supervisión y promoción de la DO correspondiente.

2.6 Funciones de los consejos reguladores en España

Cada DO cuenta con un código de prácticas implementado por su respectivo consejo regulador, el cual establece las normas específicas relacionadas con el área de producción, las variedades de uva permitidas, las prácticas de cultivo, los métodos de elaboración del vino, el embotellado y los controles de calidad. Estas exigencias de certificación suponen la aplicación de reglas estrictas, así como restricciones y un sobrecoste para las empresas que deciden adherirse al sistema. Sin embargo, a pesar de estos costes adicionales, muchas empresas optan por pertenecer a una DO debido al valor añadido que esta aporta al producto, ya que la etiqueta de origen conlleva un sobreprecio en el mercado, que dota al vino de un mayor reconocimiento estratégico (Albisu & Corcoran, 2001).

Según lo establecido en el artículo 26 de la Ley 24/2003, estatuto del 10 de julio del 2003, los fines y funciones de los consejos reguladores son múltiples. Siguiendo la clasificación propuesta por García Ruiz (2009), estas funciones consisten en la gestión de la DO, la defensa y promoción de la DO, el control de la DO y, por último, la estructuración del sector. Las siguientes cuatro subsecciones brindan cierto detalle sobre cada una de estas funciones.

2.6.1 Gestión de la denominación de origen

El consejo regulador se hace cargo de toda la cadena de producción de la respectiva DO, proceso que comienza en la viña y acaba en la adquisición del producto final (la botella de vino) por parte de los consumidores. De esta manera, el órgano regulador se encarga de garantizar el origen y calidad del producto; para ello, establece un sistema de registros y supervisiones. Algunos de los registros del ámbito de gestión son el registro de viñas y obtención del vino del año y el registro de bodegas, crianza y expedición de los vinos. En resumen, los consejos reguladores, con este exhaustivo registro de bodegas, tienen por objetivo reflejar de manera transparente en sus documentos todos los factores relevantes para determinar la calidad y autenticidad de los vinos comercializados bajo cada DO.

2.6.2 Defensa y promoción de la denominación de origen

El consejo regulador tiene como objetivos mantener el valor de la historia de la DO y propulsar su valor futuro y su comercialización a través de la preservación de las normas de la DO. Por tanto, cada consejo defiende, tanto a nivel nacional como internacional, a la DO. Además de la defensa, el consejo también se encarga de la promoción y publicidad de la DO, divulgación información relevante y tratando de transmitir una imagen de calidad, de seriedad en las transacciones, entre otras tareas.

2.6.3 El control de la denominación de origen

Para que las funciones anteriores sean efectivas es fundamental que el consejo aplique un sistema riguroso de inspección y control. Este sistema implica la elaboración de expedientes administrativos y la imposición de sanciones a aquellas bodegas que incumplan las normas establecidas por la DO. Dichos controles garantizan que solo los productos que cumplen con todos los requisitos puedan utilizar la denominación de origen correspondiente.

2.6.4 Estructuración del sector

Las acciones de los órganos reguladores fomentan la estructuración del sector vitivinícola, ya que agrupan a viticultores y bodegueros, y promueven la adopción de acuerdos entre ambos agentes. Es debido a esto que otro de los fines de los consejos reguladores es fomentar la vertebración de los operadores de cada una de las DO y la adopción de acuerdos, buscando el equilibrio de intereses entre el sector productor y el sector elaborador. Gracias a las funciones de los consejos reguladores y al control de las DO, estas certificaciones transmiten distintas connotaciones positivas, como reconocimiento, calidad, reputación y lealtad, aspectos que se conocen como los cuatro activos multidimensionales del valor de marca (Aaker, 1991).

2.7 Características y situación actual de los consejos reguladores en España

En la actualidad, la regulación de nombres tradicionales —elemento de diversificación dentro del sector vitivinícola puesto en marcha con la Ley 24/2003— se rige por la Ley 672015, del 12 de mayo del 2015. Aunque los efectos de esta regulación se han hecho notar desde el 2003, en lo que respecta a la presencia de diversas tipologías de DO protegidas, entre las noventa que hay actualmente reconocidas, la distribución por nombres tradicionales de denominación, que siguen un orden jerárquico en cuanto a requisitos, es la siguiente: seis vinos de calidad, sesentaiocho DO, dos DO calificadas y catorce vinos de pago.

En España conviven setenta DO, las cuales se encuentran distribuidas por comunidades. De este universo, dos son DO calificadas (Rioja y Priorato), las cuales tienen unas exigencias suplementarias en cuanto a normativa y antigüedad. Se exige una antigüedad mínima de diez años como DO. Todos los vinos de la DO deben ser embotellados por bodegas inscritas en la DO. Se establecen sistemas concretos para realizar exámenes analíticos y organolépticos de los vinos; las bodegas inscritas solo podrán dar entrada a uva procedente de viñedos inscritos o a mostos procedentes de otras bodegas también inscritas en la misma DO y, en ellas, se deberá elaborar y embotellar exclusivamente vino con derecho a tal DO. Además, es obligatoria una delimitación cartográfica de los terrenos aptos en el caso de las DO calificadas. Una DO establece las condiciones de producción y elaboración de sus vinos, para lo cual conjuga factores naturales (suelo y clima) y humanos (saber hacer) que le permiten lograr que su vinos tengan la mayor calidad.

Al igual que con las DO calificadas, para producir uva destinada a la elaboración de vino con DO, el viñedo tiene que estar en la zona geográfica delimitada y corresponder a las variedades de uva autorizadas por dicha denominación. Además, la DO establece también unos requisitos técnicos en lo que se refiere al sistema de producción, como son la densidad de plantación, el sistema de conducción, la poda, las prácticas culturales, la producción máxima por hectárea, etcétera. De modo similar, se fijan unos condicionantes técnicos para las bodegas inscritas. Cada DO se rige por una reglamentación particular aprobada por la administración.

De esta manera, cada DO tiene sus propias características estructurales (volumen de producción, número de viñedos, empresas inscritas, etcétera), historia, reputación y dinámicas propias internas entre sus miembros, que hacen distintas las acciones y objetivos de cada colectivo. Por tanto, tal y como concluyen Sanjuán y Albisu (2004), aun siendo distintas las características individuales de cada empresa, la ubicación en una u otra DO tiene un fuerte impacto en el posicionamiento de la empresa.

3. METODOLOGÍA DE INVESTIGACIÓN

La investigación se llevó a cabo respetando los principios éticos vigentes. Todos los participantes fueron informados sobre los objetivos del estudio y dieron su consentimiento informado para participar. Los datos recopilados fueron anonimizados y utilizados exclusivamente con fines académicos y científicos. El estudio contó con la aprobación del Comité de Ética de la Universidad de Zaragoza, lo que garantiza el cumplimiento de los estándares éticos establecidos para investigaciones con participación institucional y empresarial.

4. RESULTADOS

El análisis de los datos revela una marcada heterogeneidad en los niveles de exportación entre las distintas DO vitivinícolas españolas. Según los datos del Observatorio Español del Mercado del Vino (2022), el valor de las exportaciones españolas de vino en el 2021 ascendió a 2879,3 millones de euros en el mercado internacional. Más de la mitad corresponden a dos DO: el 30 % pertenece a la DO Rioja y el 23 % corresponde a la DO Cava. El restante 46 % corresponde a la suma de los bajos valores de exportaciones de bodegas pertenecientes a las 68 restantes DO, entre las que destacan Ribera del Duero (5 %), Cataluña (4 %) y Jerez (4 %). Estas disparidades sugieren que las diferencias en el volumen de exportaciones podrían estar vinculadas a características estructurales específicas de cada denominación.

Con el fin de explorar esta hipótesis, se ha realizado un análisis conjunto de los valores de exportación y una serie de variables contextuales de las DO: número de bodegas registradas, número de viticultores, superficie cultivada (en hectáreas) y antigüedad del correspondiente consejo regulador. Respecto al número de bodegas, se observa una alta concentración: las seis DO con mayor número de bodegas representan el 50 % del total nacional. Este patrón de concentración se repite en las demás variables estructurales. El 50 % del total de viticultores (160 171) y de terreno de cultivo (750 637 hectáreas) se encuentra también concentrado en estas seis denominaciones. Esta evidencia empírica apunta a una posible relación entre el tamaño estructural de la DO y su capacidad exportadora.

De hecho, las cuatro DO con mayor volumen de exportación también son aquellas que registran el mayor número de bodegas, viticultores y superficie cultivada. Esta correlación puede interpretarse a la luz de la teoría de recursos, que establece que un mayor tamaño organizativo conlleva una mayor dotación de recursos financieros, humanos y logísticos, lo que facilita la actividad exportadora (Wagner, 1995). No obstante, esta relación no se cumple de forma generalizada. Otras DO, como Jerez y Cariñena, con volúmenes exportadores relativamente elevados, no se caracterizan por contar con una gran dimensión estructural. Por tanto, aunque el tamaño puede constituir un factor facilitador, no se trata de una condición suficiente ni determinante para explicar la intensidad exportadora.

Otra variable analizada ha sido la antigüedad de los consejos reguladores, entendida esta como experiencia institucional acumulada. La entrada en mercados internacionales requiere afrontar múltiples desafíos —culturales, regulatorios, logísticos y de consumo—, por lo que la literatura ha identificado la edad como un posible factor explicativo de la capacidad exportadora. Majocchi et al. (2005) sostienen que una mayor experiencia está asociada a una mayor intensidad exportadora, mientras que estudios como los de Moen y Servais (2002) no hallan evidencia concluyente en este sentido. En línea con esta falta de consenso, los resultados de este estudio muestran también resultados mixtos: Rioja, la DO más antigua (establecida en 1925), lidera las exportaciones, lo que refuerza la hipótesis de la experiencia como ventaja competitiva; sin embargo, Cava, constituida en 1986, se posiciona como la segunda DO más exportadora, lo que sugiere que la experiencia institucional, por sí sola, no explica completamente la variabilidad en los niveles de exportación.

A partir del análisis de las características estructurales de las DO y sus respectivas bodegas, se procedió a clasificar los consejos reguladores según el grado de apoyo que ofrecen a la internacionalización de sus bodegas. En este sentido, se prestó atención a tres ejes fundamentales: apoyo en logística, apoyo en innovación y desarrollo, y apoyo en formación. La actividad logística se entiende como un conjunto de operaciones repetitivas realizadas por personas o entidades desde que las materias primas se transforman en un producto terminado, sumado a un valor agregado para el cliente final. Lambert et al. (1998) indican que las actividades logísticas se dividen en actividades logísticas internas y actividades logísticas externas. Las primeras tienen que ver con el pronóstico de la demanda, la administración de inventarios, la manipulación de materiales, el procesamiento de órdenes, la selección de plantas y bodegas, el aseguramiento del abastecimiento, entre otros; las segundas tienen que ver con el servicio al cliente, la comunicación logística, el servicio de soporte, el transporte, etcétera. En su perspectiva, la logística, tanto interna como externa, tiene un efecto directo en las exportaciones, ya que une el producto con los clientes finales tanto nacionales como internacionales.

Más de la mitad de los consejos reguladores realizan actividades de apoyo a la logística de las bodegas, entendiéndola como una actividad primordial. Con este apoyo a la logística, las bodegas pueden conseguir reducir los costes y tiempo en sus operaciones logísticas, relacionándose con un aumento de las exportaciones.

En cuanto a la innovación, gran parte de la literatura destaca que la capacidad de una empresa para crear productos nuevos o diferentes es más importante cuando comienza a entrar en mercados extranjeros y se encuentra con mayor presión para innovar para poder competir con las empresas internacionales (Cavusgil & Zou, 1994). De esta perspectiva nace la importancia del análisis de la innovación como generadora de ventajas competitivas en las empresas. Según Rodríguez y García Rodríguez (2005), la innovación puede generar dos ventajas competitivas. Por un lado, las innovaciones de procesos pueden crear ventajas competitivas a través de ganancias en eficiencia de procesos; por otro lado, las innovaciones de productos pueden conducir a una ventaja competitiva en el valor del cliente, lo que aporta una mayor diferenciación en las características del producto.

En sus resultados, gran cantidad de investigaciones le atribuyen un importante papel a la innovación en el grado de exportaciones de las empresas y de diversidad de mercados en los que pueden actuar. Por ejemplo, las empresas innovadoras de un determinado sector tienen una mayor propensión exportadora que el promedio del sector (Hirsch & Bijaoui, 1985) o un mayor alcance geográfico en sus actividades de exportación (Belderbos et al., 2008). Con todo, a pesar de que la literatura concluye que una mayor inversión en innovación potencia las actividades exportadoras de las entidades, solo un 13 % de los consejos reguladores se enfoca en ofrecer apoyo a la innovación y al desarrollo de sus bodegas como una actividad primordial.

Según Pinho y Martins (2010), la falta de personal cualificado es una importante barrera para el desarrollo de las exportaciones en las empresas. Por tanto, para crecer en la participación de mercados extranjeros, las empresas requieren de un aumento en el número de trabajadores involucrados en la gestión de actividades internacionales. Pero no solo se necesita aumentar el número de empleados, sino también que estos posean un nivel de educación superior que incida positivamente en los procesos de toma de decisión importantes para la actividad exportadora. Estudios como el de Contractor y Mudambi (2008) coinciden en afirmar la importancia del nivel de educación de los empleados para conseguir el éxito competitivo en los mercados extranjeros. Una educación superior puede ofrecer la oportunidad de analizar nuevos contextos y contactar diferentes personas, lo que propicia un mayor acceso a nuevos mercados (Wiersema & Bantel, 1992).

A partir de esta teoría, se analiza el grado de actividad formativa que ofrecen los consejos reguladores a sus bodegas. Destaca el bajo porcentaje de consejos reguladores que ofrecen formación a sus bodegas adheridas: alrededor del 40 % de los consejos indica que no ofrecen formación nunca o solo en escasas ocasiones.

A partir del análisis conjunto de estos tres indicadores (logística, innovación y formación), se ha construido un índice de intensidad de apoyo a la internacionalización. Los resultados muestran que el 87 % de los consejos reguladores presenta niveles de apoyo superiores a la media, mientras que el 13 % restante —integrado por nueve consejos (Alella, Cataluña, Chacolí de Vizcaya, Conca de Barberá, Gran Canaria, La Mancha, Lanzarote, Mondéjar y Ribera del Duero)— ofrece niveles significativamente inferiores.

5. DISCUSIÓN

Esta sección interpreta de forma crítica los hallazgos y destaca que las divergencias entre apoyo institucional y exportaciones podrían explicarse por factores contextuales como la orientación estratégica de las bodegas, su modelo de negocio o el posicionamiento de sus productos.

Los resultados de este trabajo ofrecen importantes contribuciones a la literatura existente. Aunque proporciona validación empírica para las explicaciones de la teoría de recursos y capacidades sobre el rendimiento exportador en la industria del vino, va más allá cuando aporta evidencia que sugiere que el rendimiento exportador de las bodegas está vinculado a las actividades de los consejos reguladores. Esto se alinea con la creciente demanda de investigación empírica que fundamenta el marco institucional dentro de la industria agroalimentaria, como lo menciona Barbosa (2021). Este trabajo, junto con el de Depetris-Chauvin y Fernández-Olmos (2024), se destaca como uno de los pioneros en explorar la relación interconectada entre las capacidades de las bodegas y las actividades de los consejos reguladores en la influencia del rendimiento exportador de una bodega. Esta área de investigación, considerada altamente necesaria y prometedora por muchos académicos (Fernández-Olmos et al., 2021; Fernández-Olmos & Malorgio, 2020; Marco-Lajara et al., 2022), añade una perspectiva valiosa al cuerpo de conocimiento existente.

Del análisis realizado, se desprende la existencia de dos grupos claramente diferenciados en función de la intensidad de las actividades de apoyo ofrecidas por los consejos reguladores. Por un lado, aquellos que proporcionan un nivel bajo de apoyo y, por el otro, aquellos que presentan una alta intensidad en dichas actividades.

Al correlacionar la intensidad del apoyo institucional con la actividad exportadora de las bodegas, no se observa una relación lineal en todos los casos. Así, unas DO como Rioja y Cava, que lideran las cifras de exportación a nivel nacional, se encuentran dentro del grupo de consejos reguladores con alta actividad de apoyo, lo que sugiere una posible relación positiva entre ambas variables. Sin embargo, esta tendencia no se mantiene en todos los casos. Unas DO como Cataluña y Ribera del Duero, que presentan también niveles elevados de exportación, se sitúan en el grupo de consejos con una baja intensidad de apoyo, lo que pone de manifiesto la complejidad de esta relación y la posible influencia de otros factores estratégicos o estructurales.

Entre las actividades de apoyo más relevantes que pueden ejercer los consejos reguladores, destaca la promoción exterior de los vinos adscritos a cada DO. Diversos estudios coinciden en señalar que la inversión en publicidad mejora el posicionamiento competitivo de una empresa al favorecer su diferenciación en el mercado y su capacidad de apropiación de valor (Chu & Keh, 2006). En un contexto económico globalizado como el actual, se cree que las empresas que invierten en publicidad generarán más ventas en los mercados extranjeros que las que no lo hacen (Kotabe et al., 2002). Numerosas investigaciones han concluido que las inversiones publicitarias tienen una fuerte influencia positiva en la intensidad de las exportaciones (Hoang, 1998). También, análisis empíricos concluyen que las empresas más intensivas publicitariamente tienden a diversificarse geográficamente al poseer mayores activos intangibles, como reconocimiento de marca o reputación, los cuales pueden utilizarse como un bien público, al ser fácilmente reconocibles y transferibles entre países (Davies et al., 2001; Kim & Mathur, 2008).

En el caso concreto del sector vitivinícola, una de las herramientas promocionales más relevantes es la participación en ferias internacionales. Entre ellas, destaca ProWein, considerada la feria líder mundial de vinos y licores. Este evento constituye el principal punto de encuentro del sector para profesionales de la viticultura, la producción, el comercio y la gastronomía. Contar con un *stand* en esta feria supone una oportunidad estratégica de visibilidad internacional, tanto para las bodegas como para las propias DO. En su última edición, celebrada antes de la pandemia, en el 2019, solo veinte consejos reguladores participaron con un *stand* propio dedicado a su DO. Resulta significativo que dentro de este grupo se encuentren las DO con mayores niveles de exportación, lo que sugiere una posible relación positiva entre la participación activa en ferias internacionales y el rendimiento exportador de las bodegas. Esta observación refuerza la idea de que las actividades promocionales impulsadas por los consejos pueden constituir una herramienta clave para la internacionalización del sector.

6. LIMITACIONES Y FUTURAS LÍNEAS DE INVESTIGACIÓN

Esta investigación presenta algunas limitaciones que deben considerarse al interpretar los resultados. Aunque se logró una tasa de respuesta del 100 % por parte de los consejos reguladores existentes en España, el análisis se ha centrado únicamente en el año 2021 y en un solo sector productivo, el vitivinícola. Además, la metodología utilizada fue principalmente descriptiva y transversal, lo que dificulta establecer relaciones causales o evaluar la evolución temporal de los fenómenos observados.

A partir de estos hallazgos, se abren diversas líneas de investigación futuras. Una de las más prometedoras consiste en analizar las causas que explican las notables diferencias en el rendimiento exportador entre DO, cuyos consejos muestran un alto nivel de apoyo a la internacionalización. Para ello, sería necesario estudiar posibles efectos moderadores vinculados tanto a características internas de las bodegas (como el tamaño, la experiencia exportadora o la orientación estratégica) como a factores externos o contextuales.

Asimismo, se sugiere ampliar el análisis del efecto de pertenencia a una DO a otros ámbitos económicos, como la supervivencia empresarial, la diversificación de mercados o la eficiencia operativa. Desde una perspectiva metodológica, resultaría recomendable complementar este enfoque descriptivo con técnicas estadísticas adicionales, tales como análisis de correlación o de conglomerados (*clustering*), que permitan identificar patrones significativos y relaciones más robustas entre las variables analizadas.

7. CONCLUSIONES

El objetivo principal de este estudio fue analizar si la pertenencia a una DO guarda una relación significativa con la actividad exportadora de las bodegas españolas. A lo largo del trabajo se ha puesto de manifiesto la relevancia del sector vitivinícola tanto a nivel internacional como nacional, destacando su peso específico en la industria agroalimentaria española, su aportación al valor añadido bruto y su capacidad para generar empleo. Asimismo, se ha evidenciado la fuerte vinculación entre los productos vitivinícolas y su origen geográfico, así como el uso de métodos tradicionales de producción, elementos que configuran una ventaja competitiva basada en la diferenciación.

En este contexto, la producción vitivinícola nacional se divide entre vinos con DO protegida, vinos con indicación geográfica protegida y vinos sin calificación. Los datos de la campaña 2019/2020 reflejan que cerca del 50 % del volumen de producción corresponde a vinos calificados como con DO protegida. Además, de los veintiún millones de hectolitros exportados por el sector, aproximadamente cinco millones corresponden a vinos con DO protegida, lo cual sugiere una notable capacidad exportadora de las bodegas acogidas a esta certificación.

Con base en la escasa literatura previa sobre el tema (Bramley et al., 2009; Josling, 2006), cabría esperar que la pertenencia a una DO se asocie positivamente con el comportamiento exportador de las bodegas. En este sentido, los resultados del análisis descriptivo realizado permiten observar una creciente preferencia del consumidor por vinos certificados, lo que parece tener una incidencia favorable en la internacionalización de las empresas del sector. Esta preferencia se vincula al valor añadido percibido en términos de calidad, autenticidad y origen del producto.

Además del análisis desde la perspectiva del consumidor, el estudio ha abordado el enfoque empresarial, centrándose en el papel que desempeñan los consejos reguladores como agentes de apoyo a la internacionalización. Para ello, se ha evaluado la intensidad de las actividades de apoyo proporcionadas por estos organismos en ámbitos como la logística, la innovación, la formación, la cooperación, las infraestructuras, la promoción, la financiación, la consultoría y la asistencia técnica.

Los resultados muestran importantes diferencias en lo que respecta a la intensidad con la que apoyan los consejos reguladores a las bodegas de su DO, distinguiéndose dos grupos muy diferenciados: los de alta intensidad y los de baja intensidad. Dentro de los grupos de baja intensidad, se observa una fuerte relación entre la baja intensidad de apoyo a la internacionalización y el bajo valor de las exportaciones. Pero destaca la no relación concluyente dentro del grupo de alta intensidad de apoyo, en el que se encuentra a DO, como Cava o Rioja, que ofrecen una fuerte intensidad de apoyo a la internacionalización y que parecen desembocar en un mayor valor de exportaciones; y otras DO, como Abona o La Palma, que a pesar de ofrecer un fuerte apoyo a la internacionalización no muestran altos valores en las exportaciones.

Por tanto, se concluye que, si bien la pertenencia a una DO puede influir en el comportamiento exportador de las bodegas, esta relación no es automática ni uniforme, dado que existen múltiples factores moderadores, como los recursos internos de las empresas, su estructura organizativa o su orientación estratégica. Este hallazgo refuerza la necesidad de adoptar enfoques más integrales que consideren tanto los recursos colectivos, como el apoyo de los consejos reguladores, como las capacidades individuales de cada bodega.

En comparación con el estudio base de Fernández-Olmos et al. (2021), este trabajo amplía el enfoque al incluir consejos reguladores con distintos niveles de implicación institucional. Mientras que dicho estudio original se focalizaba en bodegas con fuerte presencia internacional, la presente investigación permite observar también a aquellas con estrategias más locales, ofreciendo así una visión más diversa del papel de las DO en la exportación.

Por último, esta investigación ofrece una serie de contribuciones relevantes para los gobiernos e instituciones públicas vinculadas al sector, en particular los consejos reguladores. El apoyo institucional a las bodegas, más allá del ámbito exclusivamente económico, puede favorecer los niveles de exportación y, en consecuencia, contribuir al fortalecimiento de la economía nacional, dado que el vino es uno de los productos españoles con mayor demanda internacional. Es fundamental que dichas instituciones evalúen críticamente el tipo de apoyo que brindan y adapten sus estrategias a las necesidades específicas de cada consejo regulador, considerando la diversidad estructural y organizativa de las bodegas que los integran. En conclusión, esta investigación contribuye al cuerpo teórico sobre el enfoque de recursos y capacidades al demostrar cómo los recursos colectivos, en este caso la pertenencia a una DO, pueden influir en la competitividad internacional de las empresas vitivinícolas. Los resultados proporcionan información útil para el diseño de políticas sectoriales más eficaces y orientadas a fortalecer la presencia del vino español en los mercados internacionales.

DECLARACIONES

Disponibilidad de datos

La investigación se llevó a cabo respetando los principios éticos vigentes. Todos los participantes fueron informados sobre los objetivos del estudio y dieron su consentimiento para participar. Los datos recopilados fueron anonimizados y utilizados exclusivamente con fines académicos y científicos.

Uso de inteligencia artificial

No se ha empleado inteligencia artificial para la redacción, análisis o generación de contenido en este manuscrito.

Conflicto de intereses

La autora declara que no existen conflictos de interés.

Financiamiento

La investigación no recibió apoyo financiero externo. Fue desarrollada con recursos propios de la autora y en el marco académico de la Universidad de Zaragoza.

Contribución de la autora (CRediT)

CRL: conceptualización, revisión de literatura, diseño metodológico, recolección y análisis de datos, redacción del manuscrito y revisión final.

Aprobación ética

El estudio fue aprobado por el Comité de Ética de la Universidad de Zaragoza y se ajustó a los principios éticos vigentes para investigaciones con participación institucional y empresarial.

Declaración de originalidad

Se declara que el manuscrito es original, no ha sido publicado previamente ni se encuentra en proceso de revisión en otra revista. Todos los resultados y conclusiones derivan del trabajo de investigación realizado.

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MAPPING THE PATH TO SUSTAINABILITY: A GREEN FINANCE ROADMAP AND BIBLIOMETRIC INSIGHTS

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Abstract

Aim: This paper seeks to provide a comprehensive analysis of past, present, and future trends in green finance. As countries face increasing public pressure to tackle climate change, green finance serves as the bridge between investors seeking more secure funding options and society's demands for solutions to reduce the risks caused by climate change. **Methodology:** A bibliometric analysis was conducted to gain in-depth insights into the trends in green finance, while also identifying essential researchers, relevant keywords, and future trends. **Results:** Researchers have shown a growing interest in green finance, especially since 2018. The most active regions in green finance—East Asia, Europe, and North America—already benefit from strong environmental regulations and developed financial markets. **Originality / value:** The results shed light on the field of green finance and its future trends. Moreover, they highlight the issues faced by entrepreneurs and the general public, considering the increasingly powerful effects of climate change. **Practical Implications:** Green finance is gaining prominence as the bridge between investors' needs for less risky investments and society's demands for climate-conscious capital formation and investments. **Social Implications:** Green finance plays an important role in establishing more private–public partnerships, which lead to enhanced sustainability standards and long-term and stable economic growth.

Keywords: green finance, bibliometric analysis, sustainable investing, climate change, roadmap
JEL: G11, Q01, Q56, C80

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TRAZANDO EL CAMINO HACIA LA SOSTENIBILIDAD: HOJA DE RUTA DE LAS FINANZAS VERDES Y PERSPECTIVAS BIBLIOMÉTRICAS

Resumen

Objetivo: ofrecer una visión global de las tendencias pasadas, presentes y futuras en el ámbito de las finanzas verdes. A medida que los países se enfrentan a presiones cada vez mayores de la opinión pública para hacer frente al cambio climático, las finanzas verdes sirven de puente entre los inversores que buscan opciones de financiación más seguras y las demandas de la sociedad de soluciones para reducir los riesgos causados por los cambios en el clima. **Metodología**: se realizó un análisis bibliométrico para conocer en profundidad las tendencias de las finanzas verdes y, al mismo tiempo, identificar a los investigadores importantes, las palabras clave relevantes y las tendencias futuras. **Resultados:** el interés de los investigadores en las finanzas verdes se ha incrementado, especialmente a partir del año 2018. Las regiones más interesadas en las finanzas verdes son Asia Oriental, Europa y América del Norte, que ya se benefician de fuertes regulaciones ambientales y mercados financieros desarrollados. **Originalidad / valor:** los resultados de este trabajo arrojan luz sobre el campo de las finanzas verdes y las tendencias futuras a las que se enfrentará. Además, también pone de relieve los problemas a los que se enfrentan los empresarios y el público, teniendo en cuenta los efectos cada vez más potentes del cambio climático. **Implicancias prácticas**: las finanzas verdes, como tema cada vez más importante, sirven de puente entre las necesidades de los inversores de proyectos menos arriesgadas y las demandas de la sociedad de formación de capital e inversiones con conciencia climática. **Implicancias sociales**: las finanzas verdes desempeñan un papel importante en el establecimiento de más asociaciones público-privadas que conduzcan a normas de sostenibilidad más estrictas y a un crecimiento económico duradero y estable.

Palabras clave: finanzas verdes, análisis bibliométrico, inversión sostenible, cambio climático, hoja de ruta

1. INTRODUCTION

This study aims to examine the academic literature on green finance through a bibliometric analysis to identify the main thematic trends, research networks, and conceptual developments in the field between 2015 and 2023. In addition, it explores how the literature contextualises green finance within a paradoxical framework. At the same time, it analyses how the evolution of the concept of green finance is reflected in scientific publications, identifying the main themes, emerging trends, and existing gaps in sustainable green finance. The study also considers how green finance policies can contribute to achieving sustainability objectives, considering the importance of integrating sustainability objectives into financial digitalisation and digital transformation policies to support sustainable green finance.

Thus, to guide this bibliometric analysis, we focus on the following research questions:

1. What are the main emerging trends and themes in green finance research identified through the bibliometric analysis of publications from 2015 to 2023, and how do these trends reflect the evolution of climate change concerns and environmental regulation globally?

2. How is the network of collaboration between researchers and institutions in the field of green finance structured, and who are the key actors and research hubs influencing the direction and impact?
3. To what extent does the bibliometric analysis of green finance publications reveal an integration of digital transformation concepts and tools, and what potential synergies and research opportunities arise from combining these two areas?

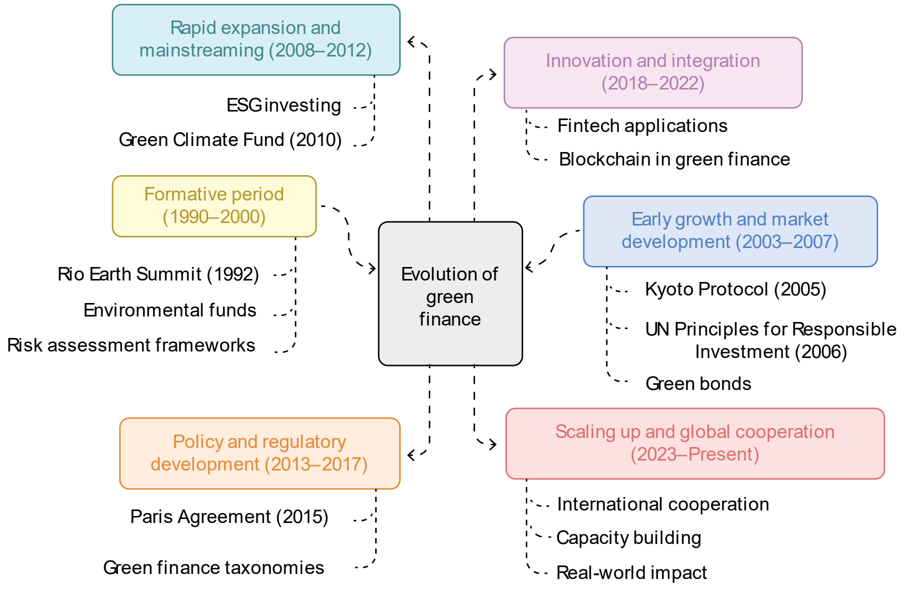
The current body of literature highlights the ever-increasing role of green finance in reaching sustainable development goals across the European Union (EU) member states. Therefore, the bibliometric analysis offers a comprehensive tool for identifying changes in green finance research. This approach is supported by Ozili (2022), who offers a global review of green finance literature and underscores the importance of bibliometric methods in clarifying the field's evolution and fragmentation.

The growing emphasis on sustainability is not only a response to global environmental degradation but also a shift in economic thinking—from short-term growth to long-term resilience (Pan et al., 2020; Volz, 2018; Zhang et al., 2019). Notably, the 1992 Rio Earth Summit and the Kyoto Protocol laid the foundation for financial instruments tailored to environmental outcomes, including carbon markets and green bonds (Chang et al., 2020; Newell et al., 2014). These initiatives have helped formalise the role of finance in addressing environmental externalities.

Figure 1 presents the key milestones and initiatives in the evolution of green finance.

Figure 1

Evolution of Green Finance: Key Milestones and Initiatives



Green finance represents a dynamic and increasingly critical dimension of sustainable economic development. It connects financial markets with environmental sustainability objectives, fostering investments that support green technologies, renewable energy, and low-carbon infrastructure. The urgency of addressing climate change, together with international commitments such as the Paris Agreement and the United Nations (UN) Sustainable Development Goals (SDGs), has accelerated the relevance of green finance in both academic research and policy planning (Daoulhadj & Hussin, 2023; Ma & Chang, 2023). Moreover, Liu and Wu (2023) highlight the growing integration of green finance into sustainability reporting and the environmental, social, and governance (ESG) performance frameworks, thereby strengthening its influence on regulatory practices and investment behaviour.

Between 2008 and 2024, green finance has transitioned from a niche concept to a cornerstone of economic policy. Crises such as the 2008 global financial collapse and the COVID-19 pandemic catalysed transformations in how capital is deployed, giving rise to ESG standards and green climate funds (Berensmann & Lindenberg, 2016; Kotsantonis et al., 2016). Increasing attention from academia and the private sector has further legitimised this paradigm shift (Ivanova et al., 2021; Scheel et al., 2020). Nevertheless, the field still lacks a consolidated analytical synthesis of these developments. Furthermore, the success of green finance depends on institutional alignment with innovation and policy tools, especially in emerging economies (Chen et al., 2024).

The 2008 global financial crisis had a profound impact on the financial markets worldwide, but it catalysed changes in investment practices (Geels, 2013). Prior to the crisis, in 2006, the UN published the Principles for Responsible Investment, which focused on ESG—an integral component of green finance—thereby increasing its visibility on the financial landscape (Berensmann & Lindenberg, 2016; Kotsantonis et al., 2016). Moreover, the Green Climate Fund and the Paris Agreement—which came into force in 2010 and 2015, respectively—jump-started national green finance strategies within the EU (Berensmann & Lindenberg, 2016). Furthermore, the development of green finance taxonomies before 2020 facilitated the standardisation of definitions and measurements (Ehlers et al., 2022).

A significant milestone occurred in 2018, with the emergence of technological developments and innovative financial instruments (Nassiry, 2019). Dorfleitner and Braun (2019) stated that advancements in blockchain and fintech have enhanced the efficiency and accessibility of green finance. Additionally, green finance faces a growing need for integration with global frameworks and regulations (Puschmann et al., 2020). The surge of interest in green finance from institutions and academia observed in 2018 can be attributed to macroeconomic factors, overconsumption of limited natural resources, and heightened public awareness of global climate challenges (Bautista-Puig et al., 2021; Paletta et al., 2019; Scheel et al., 2020).

All these events have, therefore, had a significant impact on sustainable development prospects. Consequently, sustainability assessment and improvement have relied on methodologies and performance measures adopted across various fields. Although this quantitative approach facilitates the analysis and improvement of sustainability, it offers a limited perspective on the complex social, environmental, and economic challenges involved (Arena et al., 2009). A diverse range of innovative financial mechanisms has facilitated the implementation of green finance practices, including green loans, green bonds, and sustainability-related finance (Ivanova et al., 2021).

Previous bibliometric efforts, such as that of Yun and Hu (2024), have outlined the evolution of thematic priorities in green finance, revealing how scholarship has diversified both conceptually and geographically over time. While numerous studies examine the evolution and implementation of green finance instruments, a structured bibliometric analysis mapping the intellectual landscape, key contributors, and conceptual trajectories remains underdeveloped (Gao et al., 2021; X. Yu et al., 2021; Zhang et al., 2019). Our study addresses this gap by employing bibliometric techniques to synthesise existing research and propose a roadmap for scholars and policymakers.

Additionally, this paper aims to feature leading global researchers and assess the geographical areas where research is conducted and published. It also focuses on the historical trends and emerging directions in the green finance field. The goal is to create and highlight an analytical roadmap to assist policymakers and researchers alike in understanding and anticipating the future directions of green finance. In this context, Kwilinski et al. (2025) demonstrate that aligning ESG performance metrics with national sustainability frameworks can enhance the policy effectiveness of green finance tools. Furthermore, a growing body of literature explores the barriers and enabling factors for green finance implementation. Hu and Gan (2025) identify institutional readiness, cross-sectoral collaboration, and policy clarity as critical conditions for scaling green finance globally. These findings underscore the timeliness of a structured bibliometric approach to capture both thematic evolution and research gaps.

This research offers an innovative contribution by integrating a roadmap with a comprehensive bibliometric analysis of green finance literature, particularly focusing on the period 2015-2024, which has been marked by significant growth and development in the field. The study highlights key trends, influential authors, regional contributions, and thematic evolutions, thereby highlighting emerging opportunities for future research and structural patterns in the field's development. Moreover, the study is grounded in a theoretical framework drawing from ecological modernisation theory and institutional theory, which provide a lens for interpreting green finance initiatives, particularly regarding the alignment of financial and regulatory systems. These frameworks support the examination of how institutions adapt to environmental challenges and how green innovation is enabled through financial instruments.

The present work is structured into distinct sections. Section 1 provides an introductory discussion establishing the importance of green finance. Section 2 contextualises the study by examining the growing role of green finance in promoting sustainable development goals and synthesising key theoretical perspectives, thus highlighting advancements in understanding green finance. Section 3 describes the methodological design of the bibliometric study. Section 4 outlines the critical findings, frequently utilising tables and figures to illustrate key trends and relationships within the intellectual structure. The final section synthesises the study's conclusions and discussions, drawing the main insights derived from the analysis. This synthesis not only underscores the significance of the findings but also discusses their broader implications for policymakers.

2. LITERATURE REVIEW

Green finance has gained significant momentum over the last decade, and this study aims to explore its evolution through a bibliometric analysis. The goal is to map the existing research landscape, to identify the most influential researchers, entities, and regions, and to assess the impact of green finance across various sectors. The study seeks to provide a comprehensive overview of how green finance has been integrated into economic and environmental frameworks, while also identifying research gaps and future directions. Green finance contributes to financial stability by diversifying investment portfolios, encouraging long-term investment perspectives, and diminishing financial risks connected to climate change. In addition to fostering financial stability, green finance directly supports environmental sustainability by funding renewable energy and low-carbon infrastructure, encouraging biodiversity preservation and climate adaptation, and promoting sustainable business practices.

Several authors argue that implementing green finance at the international level fosters socioeconomic development without compromising natural resources and the environment. Although the concept of green finance dates back to the 1970s, it only started to gain momentum after the 2000s (Chen, 2013). Nowadays, increasing emphasis is being placed on green finance, especially after the SDGs' approval in 2015 and the Paris Agreement in the same year. Green finance has been described as a bridge connecting finance and the environment (Salazar, 1998, as cited in Gu et al., 2021).

Green finance is increasingly linked to environmental performance, especially through instruments such as green bonds, green loans, and taxonomies (Zhang & Zhao, 2024). Scholars including Liu and Wu (2023) argue that green finance is transformative in encouraging sustainability transitions by enhancing environmental regulation, improving production standards, and catalysing green innovation. Similarly, Zhou et al. (2020) highlight that green finance promotes the coordinated advancement of financial activities, environmental safeguards, and ecological stability. However, its impact on environmental quality is contingent upon the different levels of economic growth.

Dai and Chen (2023) examine the effects of the COVID-19 pandemic on natural resources, emphasising its contribution to environmental degradation, species extinction, and climate change, and argue that green finance can create new opportunities to bolster natural resource management approaches that support ecological, social, and economic sustainability. Likewise, Bei and Wang (2023) highlight the economic recession caused by the COVID-19 pandemic, which resulted in lower natural resource prices due to reduced energy consumption. This, in turn, decreased public and private financial support for renewable energy projects, undermining their competitiveness.

Fu et al. (2023) conducted an exhaustive analysis demonstrating the critical role of green finance in advancing sustainable development and addressing environmental challenges. The aforementioned studies did emphasise its impact on multiple aspects, such as decarbonisation, the way managers assess climate risks, and the ever-increasing emphasis on durable and sustainable investments. Madaleno et al. (2022) further state that the development and promotion of renewable energy have boosted the promotion of green finance. Additionally, green finance has the potential to reduce the risks associated with broader society and with opening a business (Galaz et al., 2015; Scholtens, 2017), improve productivity (Lee & Lee, 2022), and lower CO2 emissions (Wang & Zhang, 2021), contributing to sustainable development. On the other hand, large-scale investments funded through green finance can also have adverse climate effects (Abbas & Sabah, 2024), as evidenced by the increasing trend in both CO2 emissions and green finance in China between 2004 and 2018 (Wang & Ma, 2022).

From a socioeconomic perspective, green finance enables the transition from extractive to regenerative economic models (Tolossa & Gota, 2023; Zhou et al., 2020). In emerging markets, it supports environmental resilience, while in developed economies, it contributes to decarbonisation and financial diversification. Nonetheless, structural weaknesses persist—ranging from inconsistent definitions and regulatory fragmentation (Bogacheva & Smorodinov, 2017) to weak institutional capacity, underdeveloped green capital markets (Taghizadeh-Hesary & Yoshino, 2020), lack of focused efforts (Clark et al., 2018), and the misuse or underuse of data-driven measures, which exacerbates these challenges (Desalegn & Tangl, 2022). Other studies have explored sociopolitical barriers to green finance implementation, including greenwashing (Du, 2015; Rahman et al., 2015), investor scepticism, and poor alignment between national policy goals and global standards (Udeh et al., 2024). The need for internationally harmonised green investment criteria remains a pressing issue (Deschryver & De Mariz, 2020).

Green finance leads to increased profits alongside achieving climate and environmental objectives. Banks that integrate green practices exhibit stronger profitability (Jain & Sharma, 2023). Coverage ratios for green bonds are higher than those for bank loans, and they offer more substantial internal rates of return, thus making them a preferred choice for financing projects and new investments (Alonso-Conde & Rojo-Suárez, 2020).

Research on green investment and sustainable finance has projected substantial advancements, but some challenges remain. Researchers have identified issues across financial, institutional, operational, and regulatory dimensions. One limitation is the absence of a comprehensive and uniform framework and standards for green finance. At the same time, K. Khan et al. (2022) state the need for policy frameworks that address governmental policies and limited private-sector activities.

Green investments frequently yield lower returns, involve higher risks, and require schedules that are too long for most investors to achieve a reasonable return (Ihar et al., 2022; Nawaz et al., 2021). Falcone and Sica (2019) also point out that inadequate financial institutions cannot securitise projects for funding reasons. Furthermore, there are a few straightforward methods to deal with policy issues associated with screening and choosing eligible initiatives. Sarkar and Singh (2010) note that infrastructure development and long-term financial allocation for renewable energy projects are lacking in underdeveloped nations.

Given its intricacies and complex challenges, climate change mitigation would benefit from larger emphasis on advanced research in green finance. Environmentally oriented frameworks offer the best option for diminishing climate change risks (Zafar et al., 2021).

Despite these challenges, green finance benefits from a growing body of literature encompassing both traditional and emerging areas of study. Ecologically sustainable growth—or “green growth”—has become significant as governments worldwide face multifaceted challenges, including balancing economic strength and job creation while responding to public demand for a greener economy.

Technological innovation, the development of taxonomies, and the promotion of public–private partnerships can help reduce CO2 emissions and improve the economy’s overall state by emphasising the need for better, more inclusive financing sourcing. Green fintech has the potential to enhance efficacy, transparency, and data utilisation to lead to long-lasting investments (Delaney, 2021).

Additionally, artificial intelligence (AI) can play a vital role in environmental management, process optimisation, and practices that are deemed sustainable (Trukhachev & Dzhikiya, 2023). Ecologically friendly technologies need new sources of capital for investments, and green finance—through loans, green bonds, and insurance—can provide such funding (Shah et al., 2023).

Lower investment risk through green guarantee schemes positively impacts the environment and makes investments more appealing to both the public and private sectors (Taghizadeh-Hesary & Yoshino, 2019). Additionally, pairing green investments with corporate social responsibility targets further enhances the economic and social benefits of capital investment (Sadiq et al., 2022).

According to S. Khan et al. (2022), public–private partnerships are essential for reducing CO2 emissions, deploying renewable energy, and reaching sustainability targets. Lastly, laws that facilitate the pooling of resources reduce legal risks and promote green finance, which is essential for investors and entrepreneurs to establish climate-conscious enterprises (Sadiq et al., 2022).

3. METHODOLOGY

Given the multifaceted objective of this study—to map thematic, conceptual, and institutional developments in green finance research between 2015 and 2023, while also uncovering its evolving alignment with sustainability—this research adopts a structured bibliometric approach. In doing so, it also seeks to explore how green finance is situated within a paradoxical framework that balances economic growth with ecological responsibility, and to what extent digital transformation tools and policies have been integrated into the discourse. By combining quantitative mapping with qualitative interpretation, the study aims to identify both dominant trends and research gaps, offering a comprehensive overview of the field's evolution and its practical implications for sustainable finance policy design.

This analysis considers productivity metrics, impact indicators, citation counts, and collaborations (Mejía et al., 2021). Therefore, a bibliometric analysis, as a quantitative method, enables researchers to deepen their understanding of a field of study by quantifying and visualising research trends, knowledge structures, and collaborative networks. The timeframe of 2015-2023 was selected to capture the most recent and relevant developments in green finance, reflecting a period of increased global awareness and policy implementation following the Paris Agreement in 2015, leading up to the present state of accelerated digital transformation.

Building on the gaps identified in previous studies (Bhatnagar & Sharma, 2022; Wang et al., 2025; Zhang et al., 2019), this research addresses three critical dimensions: the spatial distribution of green finance scholarship, highlighting underrepresented regions and global imbalances; the thematic undercurrents shaping the field, by detecting neglected subfields and emerging areas; and the evolution of key conceptual anchors over time. While bibliometric analysis offers valuable insights into research trends and structures, it is essential to acknowledge its limitations, including potential biases in publication databases, the exclusion of non-academic sources, and the inability to fully capture the qualitative nuances of research. Despite these limitations, this multilayered analysis provides a comprehensive understanding of the intellectual structure of green finance, directly supports the stated research objectives, and facilitates the advancement of future research agendas aligned with sustainability goals and climate policy challenges.

The bibliometric analysis provides national and global scientific information on the body of knowledge of green finance, as it utilises metrics to assess the quality and quantity of scientific publications (X. Yu et al., 2021). It allows for the systematic mapping of publication patterns, keyword co-occurrences, co-citation structures, and collaboration networks, offering both a macroscopic and thematic overview of the field. While prior contributions (Criste et al., 2024; Lobonț et al., 2024, 2025) have employed bibliometric tools to map publication trends in this field, these studies have remained largely descriptive, with limited attention to geographical disparities, thematic fragmentation, and the progression of conceptual frameworks.

The analysis considered several key aspects, including influential publications, the most productive journals and countries, authors and collaborations, research domains (Gupta & Dhawan, 2019; Li & Xu, 2021; Valenzuela-Fernández et al., 2018), and changes in relevant keywords related to green finance. Cai and Guo (2021) employed scientometric methods for their quantitative analysis, ensuring data integrity during the data extraction and processing phases.

The data analysis comprised two main components: network extraction and descriptive study. Key data information, document types and contents, as well as author collaborations are among the informative elements and characteristics examined in the descriptive analysis of the bibliographic dataset (Larivière, 2012; Tepe et al., 2022). To reveal the underlying knowledge structure and dynamics of the field, the network extraction component mapped the co-citation and co-authorship networks (Donthu et al., 2021). Furthermore, other methods for mapping networks were employed, including:

a) Co-citation analysis (Small, 1973), which occurs when a third publication cites two other publications. Its general formula is:

$$\text{Bibcocit} = A \times A' \qquad (1)$$

where A represents a reference matrix of the cited documents.

The value of *bab* indicates the number of co-citations between the publications *a* and *b*. Additionally, the Bibcocit matrix is symmetric and can also illustrate relationships and collaborations among researchers.

b) Bibliographic coupling (Kessler, 1963), which occurs when the reference list of one paper contains similar entries that overlap with those of another. Its general formula is:

$$\text{Bibcoupl} = A' \times A \qquad (2)$$

where A' represents the transpose of the document-cited reference matrix A.

The value of *bab* indicates the number of shared references between publications *a* and *b*. The Bibcoup matrix is symmetric and non-negative, as it can be expressed as the transpose of itself: Bibcoup = Bib'coup.

c) Co-word analysis (Aria & Cuccurullo, 2017), which examines the co-occurrence of keywords or phrases in the literature. The higher the co-occurrence, the stronger the conceptual relationship. The general formula is:

$$\text{Coword} = W \times W' \qquad (3)$$

Where *W* is the document–keyword matrix, and the Coword matrix is symmetric, capturing the co-occurrence of keywords.

d) Co-authorship analysis (Zhao & Strotmann, 2008), which examines patterns of author collaborations. Its general formula is:

$$\text{Coauth} = A \times A' \qquad (4)$$

Where A is the document–author incidence matrix, and the Coauth matrix is symmetric, representing co-authorship relationships.

The intellectual structure, collaboration patterns, and topic progression of the research subject, analysed through the network approaches described above, provide a comprehensive overview of the capabilities of bibliometric analysis. The Web of Science (WoS) Core Collection database, a trustworthy and comprehensive resource for academic research and assessment due to its rigorous indexing procedures, provided the bibliometric data for the study (Takyi-Annan & Zhang, 2023). WoS is considered one of the most significant and popular sources of scientific literature worldwide. This database was selected because it only includes high-quality academic journals. Moreover, the quality of data retrieved from WoS is preferable to that of other databases such as Scopus, where the reference elements are not standardised, or Dimensions, where the search classification algorithm is not efficient. Moreover, exporting WoS data in BibTex format is preferable to other available formats such as Scopus BibTex or Dimensions CSV, which do not allow the export of some metadata. The search strategy utilised the advanced online search engine and incorporated a series of keywords associated with green finance.

The primary keyword was "green finance" (n = 2125). The initial dataset included all records available between 2007 and 2024. However, to ensure relevance and focus on recent developments, the selection was narrowed to the period 2015-2024 (n = 2098). This timeframe is particularly significant due to the adoption of the Paris Agreement and the 2030 Agenda for Sustainable Development in 2015, both of which marked a turning point in the global discourse on green finance. The search and selection process focused exclusively on articles (n = 1953) published in English (n = 1941), reflecting the constraints of the software's operating language. The final bibliometric dataset comprised a total of 1941 research articles that were subjected to rigorous analysis.

Prior to the analysis, the dataset was normalised to enhance data consistency and analytical accuracy. For this purpose, we used the functions available in the Bibliometrix R package and the Biblioshiny graphical interface, which support automated data cleaning and standardisation, including the unification of author names, conversion to lowercase, removal of redundant spaces, and filtering of duplicate records. Additionally, for frequently used or potentially ambiguous terms, we performed manual validation and unification to ensure semantic consistency and the accuracy of the results.

Although complex and involving various stages, scientific mapping has become increasingly accessible with technological advancements. Numerous software tools have been developed for this purpose, among which Bibliometrix—an R package integrated with the Biblioshiny application—is noteworthy. The analysis was conducted in RStudio, a flexible and open-source integrated development environment for R. RStudio was selected over other statistical software due to its seamless integration with bibliometric packages such as Bibliometrix and its support for interactive visualisation tools, making it particularly suitable for handling complex bibliometric workflows and ensuring transparency in the analysis process.

This tool facilitates bibliometric analysis by streamlining the process of visualising and analysing large sets of scientific data, making it easier for researchers to effectively map academic trends and collaborations. Various studies using Bibliometrix within the Biblioshiny application have focused on key metrics such as the most influential authors, landmark publications, collaboration networks, conceptual structures, and the leading countries regarding productivity and partnerships.

This bibliometric study offers a comprehensive and detailed examination of scholarly literature addressing the impact of green finance and sustainable development over the past decade. It enables the assessment of the evolution of this research domain, the identification of potential avenues for future research, and the establishment of a foundation for more in-depth explorations. The analysis also evaluated national and international collaborations as well as annual author output.

Metrics such as co-citation, bibliographic coupling, keyword co-occurrence, and co-authorship were examined to explore the intellectual and social structure of the field. The analytical framework includes both descriptive statistics and network mapping. Co-word analysis identified conceptual clusters, while bibliographic coupling revealed foundational literature. Co-authorship networks enabled the exploration of international collaboration trends. The results aim to uncover emerging research directions and evaluate the field's maturity.

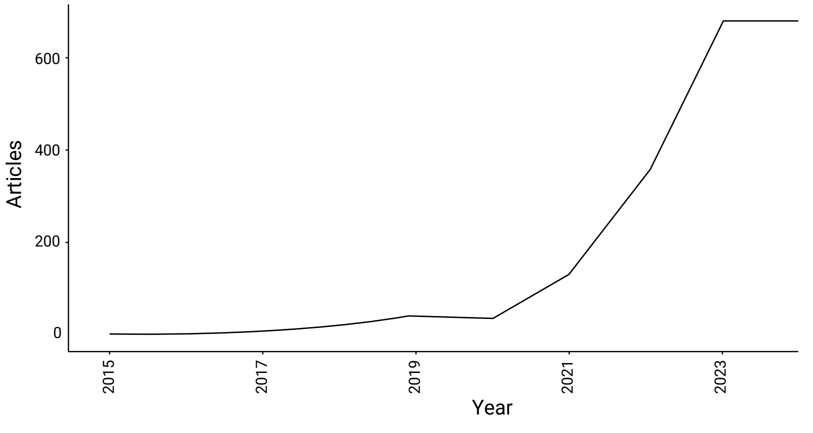
4. RESULTS

Various analyses were conducted using the Bibliometrix R package and the Biblioshiny application, processing 1941 documents from the WoS database to explore the importance and current knowledge about green finance. Visualised through scientific mapping and graphical methods, the results highlight key findings such as significant scientific collaboration networks. The analysis also includes detailed results covering scientific production from 2015 to 2024, including the most relevant and frequently cited sources, influential publications, prolific countries, and productive researchers. The following section presents and discusses these findings using data visualisation tools.

Figure 2 provides a visual representation of the scientific production related to green finance, illustrating the annual growth in academic publications.

Figure 2

Annual Scientific Production of Articles in the Field of Green Finance, 2015-2024



Between 2015 and 2024, the scientific community generated 1937 research papers, with contributions noted in every analysed year. This period reflects a growing interest in green finance, particularly in 2023 and 2024, which recorded the highest outputs with 675 and 680 publications, respectively. This trend highlights the increasing focus on integrating green finance into public policy and entrepreneurial frameworks. The increased number of publications on green finance in the most recent period, 2023 and 2024, reflects the heightened importance given to sustainability factors in global economic and financial processes. International agreements, such as the 2015 Paris Agreement on climate change, and regulatory strategies, including the EU Taxonomy for sustainable activities—which establishes standards for environmental sustainability within the EU—have stimulated the development of green finance instruments, such as green bonds and sustainability linked loans, by setting ambitious targets (including 2025 milestones) for reducing carbon emissions and promoting the transition to sustainable economies.

Green finance has become a focal point in entrepreneurial frameworks, influencing startups, venture capital, and innovation. The record number of publications in 2023 and 2024 underlines its transition from a niche academic interest to a global economic and policy priority, while also reflecting its intersections with fields such as economics, environmental science, and public policy, which have attracted diverse contributions to research. The significant growth observed after 2018 coincides with global policy developments such as the implementation of the European Green Deal and growing emphasis on ESG investing. This upward trend may also reflect increased public and private funding for sustainability-related research, as well as the financial sector's response to climate disclosure frameworks.

An analysis of publication sources was carried out to identify the scientific dissemination channels with the highest visibility in the field of green finance. Table 1 presents the 10 most relevant scientific journals from a total of 394 included in the database, ranked by the number of articles published during the analysed period. These sources reflect the editorial core of the specialised literature and serve as reference points for future research in this field. Together, these 10 journals account for 885 of the 1941 articles, representing almost half of the total sample—an indication of their central role despite the broad scope of the database. *Environmental Science and Pollution Research* is the most prominent, accounting for 10,25 % of all articles, followed closely by *Sustainability* (8,55 %) and *Resources Policy* (6,39 %).

Table 1

Top 10 Leading Journals in Green Finance

Name of the Journal	Number of Articles	Share (%)
Environmental Science and Pollution Research	199	10,25
Sustainability	166	8,55
Resources Policy	124	6,39
Energy Economics	78	4,02
Renewable Energy	75	3,86
Journal of Cleaner Production	65	3,35
Frontiers in Environmental Science	62	3,19

(*continues*)

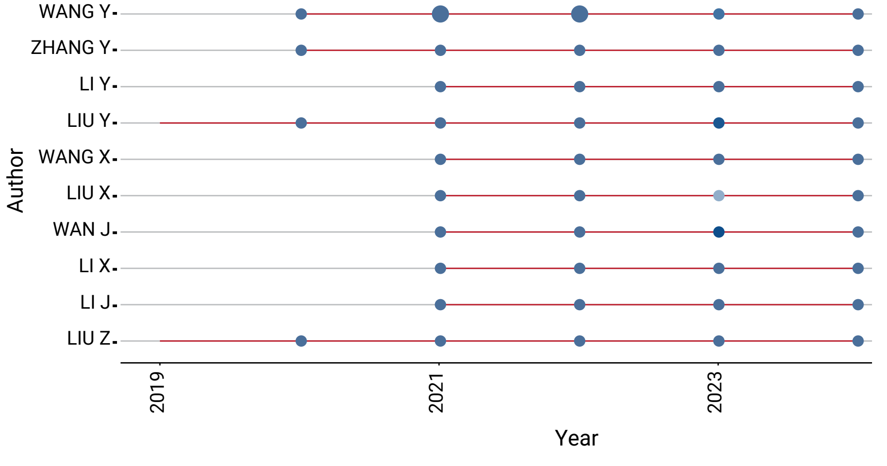
(*continued*)

Name of the Journal	Number of Articles	Share (%)
Finance Research Letters	47	2,42
Heliyon	35	1,80
Journal of Environmental Management	34	1,75
Total Articles	885	45,60

Figure 3 highlights the 10 authors with the highest number of publications in this field.

Figure 3

Production of Top Authors, 2015–2024

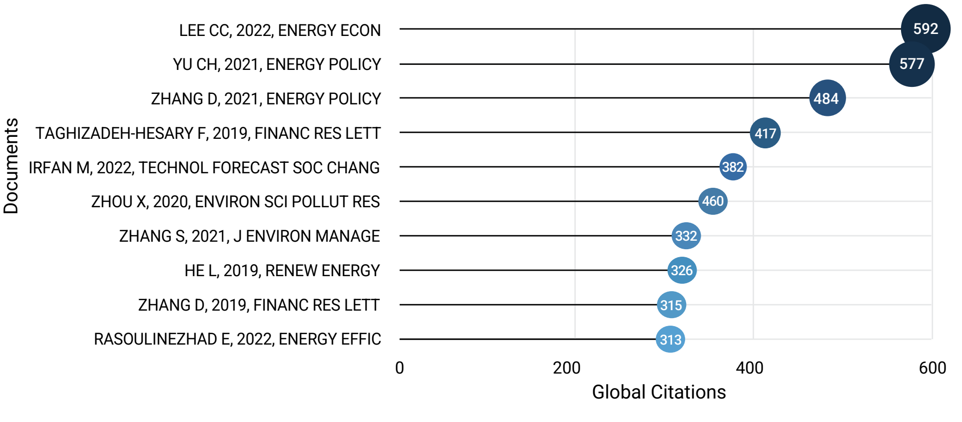


Specifically, the top authors are Liu, Y. (18 documents), Wang, Y. (17 documents), Wang, J. (14 documents), and Zhang, Y. (11 documents). The three most highly cited articles explored diverse facets and dimensions of green finance. Zhang et al. (2021) analysed the green credit policy, which mandates financial institutions to allocate more loans to environmentally friendly enterprises while imposing stricter lending criteria on firms with poor environmental performance. Under this policy, financial institutions must cease all new credit support for projects characterised by high pollution and energy consumption and implement measures to recover previously issued loans to such enterprises, effectively curbing the unchecked growth of "two high" (high energy consumption and high pollution) businesses from a funding perspective. Wang and Wang (2021) explored the role of green finance in ensuring sustainable development, noting that governments and international organisations increasingly leverage financial mechanisms to protect the environment. This entails establishing policy-based environmental protection funds, enacting relevant regulations, and introducing legislation to catalyse the growth of green finance. Traditional patterns of economic development have frequently contributed to an increased ecological burden, whereas green finance facilitates a synergistic relationship between environmental and financial systems, encouraging stakeholders to engage in sustainable practices. Huang et al. (2022) developed a green finance index to assess the relationship between green finance and green innovation, finding a positive autocorrelation between the two. They noted that financial institutions prioritise the eco-efficiency of borrowers' production or services in the absence of supportive policies. This gap has given rise to the development of green finance, which merges the principles of environmental sustainability with financial mechanisms. As a hybrid concept combining "green" and "finance", green finance represents a market-based approach and a critical tool to promote and support green innovation initiatives. The prominence of Chinese authors reflects academic productivity and strong institutional support in Chinese universities for climate finance research. Many of these authors are affiliated with government-funded institutions, suggesting a top-down influence in prioritising green finance as a national research focus.

The most relevant publications, as indicated by their citation frequencies, are presented in Figure 4.

Figure 4

Authors' Most Significant Publications and Citations, 2015–2024



Given the extensive number of documents and authors, the analysis focused on the 10 most relevant publications, measured by total citations. The findings in Figure 4 reveal that citations are concentrated among these top-cited documents, illustrating their significance in the field. The results indicate that a limited number of works have garnered substantial attention, highlighting the impact of these key publications on the overall discourse in green finance. The highest-ranked article, by Lee and Lee (2022), with 592 citations, examine the relationship between green finance and green total factor productivity (GTFP), addressing a critical area of research as countries aim for greener economies. In the second-ranked article, C.-H. Yu et al. (2021), highlight the essential role of green finance in alleviating the financial barriers to green innovation. The third, Zhang et al. (2021), address critical themes such as public spending, green economic growth, and green finance within the context of the Belt and Road Initiative, offering empirical evidence of the mediating effects of green finance between public spending and green growth.

Table 2 summarises the most cited authors in the green finance literature, ranking them by total citations and reflecting their significant contributions to the theoretical and empirical development of the field.

Table 2

Top 10 Cited Articles in the Green Finance Field

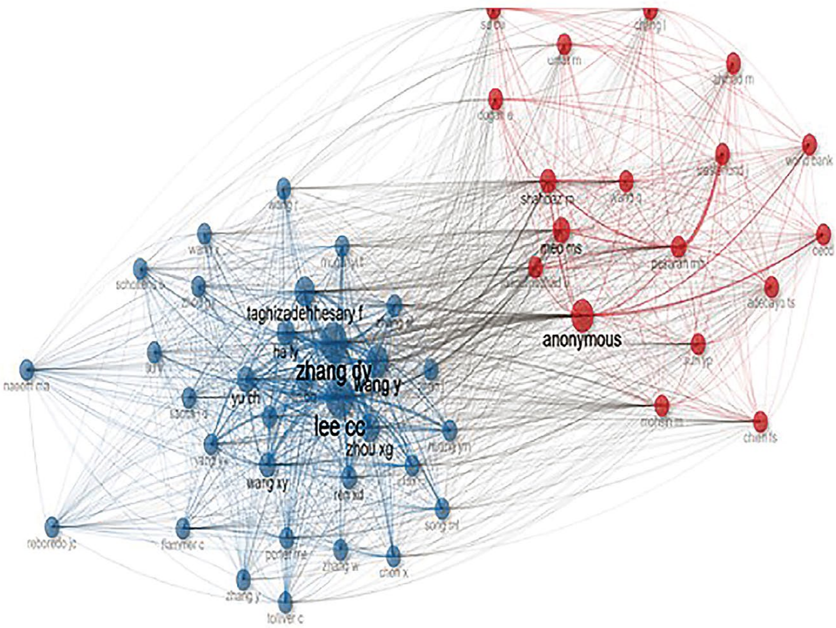
R	Title	Authors	Journal	Year	TC
1	How does green finance affect green total factor productivity? Evidence from China	Lee, C. C., & Lee, C. C.	*Energy Economics*	2022	592
2	Demand for green finance: Resolving financing constraints on green innovation in China	Yu, C. H., Wu, X., Zhang, D., Chen, S., & Zhao, J.	*Energy Policy*	2021	577
3	Public spending and green economic growth in BRI region: Mediating role of green finance	Zhang, D., Mohsin, M., Rasheed, A. K., Chang, Y., & Taghizadeh-Hesary, F.	*Energy Policy*	2021	484
4	The way to induce private participation in green finance and investment	Taghizadeh-Hesary, F., & Yoshino, N.	*Finance Research Letters*	2019	417
5	Influence mechanism between green finance and green innovation: Exploring regional policy intervention effects in China	Irfan, M., Razzaq, A., Sharif, A., & Yang, X.	*Technological Forecasting and Social Change*	2022	382
6	Impact of green finance on economic development and environmental quality: A study based on provincial panel data from China	Zhou, X., Tang, X., & Zhang, R.	*Environmental Science and Pollution Research*	2020	360
7	Fostering green development with green finance: An empirical study on the environmental effect of green credit policy in China	Zhang, S., Wu, Z., Wang, Y., & Hao, Y.	*Journal of Environmental Management*	2021	332
8	Can green financial development promote renewable energy investment efficiency? A consideration of bank credit	He, L., Liu, R., Zhong, Z., Wang, D., & Xia, Y.	*Renewable Energy*	2019	326
9	A bibliometric analysis on green finance: Current status, development, and future directions	Zhang, D., Zhang, Z., & Managi, S.	*Finance Research Letters*	2019	315
10	Role of green finance in improving energy efficiency and renewable energy development	Rasoulinezhad, E., & Taghizadeh-Hesary, F.	*Energy Efficiency*	2022	313

Note. R = Ranking; TC = Total citations.

Figure 5 presents a co-citation analysis of authors, visually demonstrating the intellectual connections and collaborative networks within the field, and identifying influential contributors and thematic clusters.

Figure 5

Co-Citation Analysis of Authors



In Figure 5, the authors' distribution is shown in two clusters. The red cluster features more anonymous authors, alongside prominent figures like Shahbaz, M., Pesaran, M. H., and Meo, M. S., who emphasise macroeconomic impacts and econometric analysis in green finance. The blue cluster centres around Zhang D. Y. and Lee C. C., focusing on environmental sustainability and policy implications. These two main clusters indicate a bifurcation in the green finance literature: one oriented toward macroeconomic modelling and econometrics, and the other toward environmental innovation and ESG policy. This divide suggests that the field is both interdisciplinary and fragmented, possibly requiring theoretical integration to enhance impact.

The most utilised terms in publications can be visualised in Figure 6.

Figure 6

Word Cloud of Significant Terms Used in Publications, 2015–2024

The prominence of terms such as "green finance development", "green finance reform", and "green finance policy" in recent research reflects a strategic focus on using green finance as a lever for both economic and environmental transformation. These terms frame green finance as an evolving, policy-based mechanism that aims to support sustainable development by creating institutional frameworks that support sustainable investments, such as green bonds, green loans, and other climate-focused financial products. "Green finance reform" reflects the financial and policy system adjustments necessary to support green investments through initiatives such as tax incentives for green bonds and subsidies for renewable energy, thereby encouraging the alignment of capital with long-term environmental objectives and promoting green technological innovations essential for the transition to a green economy.

Effective green finance policies combine incentives for compliance with sustainability standards and penalties for non-compliance, thereby incentivising industries to adopt greener and more sustainable practices. Terms such as "innovation in green technology" and "renewable energy development" highlight the essential link between green finance and technology, demonstrating how green investments can support advances in clean energy and eco-innovation. Technologies such as carbon capture and storage, advanced batteries, and low-emission transport are crucial for reducing carbon footprints and achieving net-zero emissions targets. Green finance also attracts venture capital and private investment, stimulating research and development of sustainable solutions and accelerating the transition to a green economy.

Table 3 provides a systematisation of the most frequent keywords extracted from the analysed database, complementing the general view provided by the word cloud.

Table 3

Most-Used Keywords

R	Keywords	OC	R	Keywords	OC
1	Green finance	1168	11	Energy	161
2	China	291	12	Sustainable development	157
3	Impact	288	13	Consumption	150
4	Renewable energy	257	14	Efficiency	138
5	Growth	216	15	Green	137
6	Economic growth	213	16	Emissions	131
7	Performance	203	17	Policy	130
8	Innovation	196	18	Finance	122
9	Investment	193	19	Sustainability	117
10	CO2 emissions	184	20	Green bonds	94

Note. R = Ranking; OC = Occurrence.

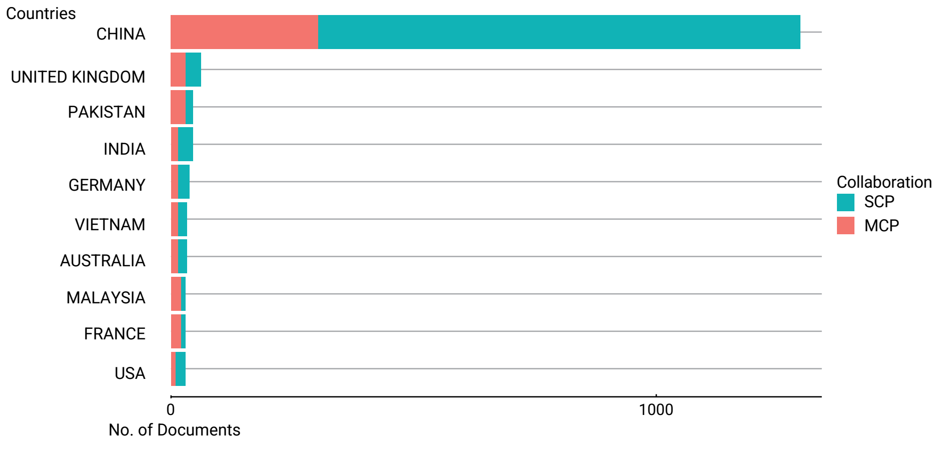
The keyword frequency analysis (Table 3) reveals a conceptually cohesive field centred on "green finance", which dominates all other terms in occurrence. However, this also suggests a risk of thematic saturation, potentially limiting conceptual innovation. The prominence of "China" not only underscores the geopolitical weight of its academic production but also raises questions about the global representativeness of research findings. It also confirms the country's influence on setting the research agenda. Keywords like "impact", "sustainability", and "economic growth" reflect an evolving focus on green finance literature from abstract conceptualisation toward measurable outcomes, directly addressing the study's first research question regarding emerging themes. This progression indicates that researchers are increasingly concerned with assessing the real-world effectiveness of green finance in supporting low-carbon development.

"Innovation" and "investment" emerge as critical channels through which sustainability goals are operationalised, while "efficiency" and "performance" serve as benchmarks for success. These terms show that green finance is considered a strategic mechanism for enabling resilient and inclusive economic growth. Moreover, the high frequency of terms such as "renewable energy", "CO2 emissions", and "green bonds" suggests that the literature focuses heavily on energy-related topics, while social dimensions such as equity or adaptation remain underexplored. This indicates both a strength, in terms of depth within environmental finance, and a gap, which future research could address by integrating interdisciplinary contributions and perspectives from the Global South. The underrepresentation of terms related to digital finance or climate adaptation further reveals gaps aligned with the study's third research question, highlighting potential opportunities for interdisciplinary exploration.

Figure 7 illustrates the collaborative efforts of countries, as well as the most prolific contributors to the core literature on green finance during the study period, 2015–2024.

Figure 7

Scientific Production and Collaboration of Countries



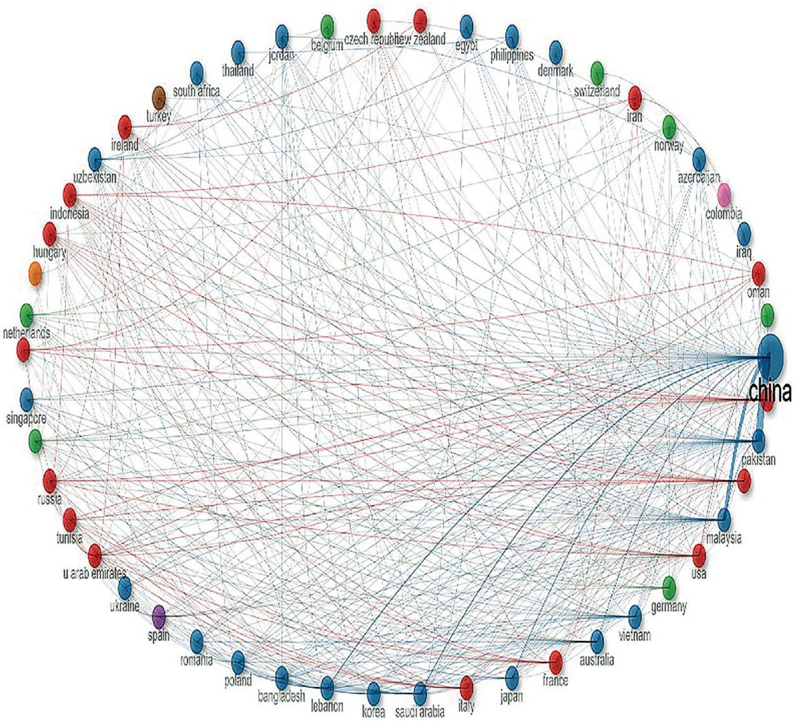
Note. SCP = single country publication; MCP = multiple country publication

Figure 7 shows that China has emerged as the most prolific contributor to green finance research, with 1301 articles published between 2015 and 2024. The EU member states, the United Kingdom, and Asian countries such as Pakistan and India also contribute significantly, although each has published less than 100 articles over the same period. The findings show the publication output of individual countries and indicate the extent of national collaborations (SCP) and international collaborations involving co-authors from multiple countries (MCP). This distribution reflects an increased reliance on international partnerships to advance research, driven by limited domestic resources or a strategic focus on knowledge exchange and cross-border initiatives. China has the highest distinction between SCP and MCP articles, with most being national collaborations. By contrast, for other leading countries, the values between SCP and MCP is relatively balanced. A collaborative network between countries reflects how interconnected and cooperative they are in addressing everyday challenges, encouraging innovation, and facilitating cross-border information and resource sharing. In the EU, the United Kingdom, and other leading regions, balanced SCP and MCP values suggest that green finance research benefits from robust domestic networks and international collaboration, enabling these countries to share insights, methodologies, and findings. This contrast between levels of cooperation is consistent with institutional theory, which suggests that national policy and resource availability influence research output and the structure of collaborative networks.

Figure 8 shows the collaborative network between countries.

Figure 8

Collaborative Network Between Countries



China appears as the largest node, indicating that it plays a prominent role within the network. It likely has the most significant impact or the greatest number of partnerships. The numerous connecting lines in the figure imply extensive international cooperation. China also stands out for its large number of SCPs, indicating a strong focus on domestic collaborations. This suggests a consolidated national effort to advance the field of green finance, with research partnerships mainly involving domestic institutions and researchers. Complementing the figure on scientific production and collaboration among countries, Table 4 summarises the data for the most active countries, highlighting the number of publications and international co-authorship connections, and reflecting the degree of academic engagement and openness to transnational partnerships.

Table 4

Top 10 Countries in Green Finance Research by Number of Publications and National/International Collaborations

Country	Number of Articles	Share (%)	SCP	MCP	International Collaboration (%)
China	1301	67,03	999	302	23,21
United Kingdom	59	3,04	30	29	49,15
Pakistan	43	2,22	13	30	69,77
India	41	2,11	28	13	31,71
Germany	3431	1,75	21	13	38,24
Vietnam	31	1,6	18	13	41,94
Australia	29	1,49	16	13	44,83
Malaysia	29	1,49	9	20	68,97
France	27	1,39	8	19	70,37
USA	24	1,24	12	12	50,00

Note. SCP = National collaborations; MCP = International collaborations involving co-authors from multiple countries.

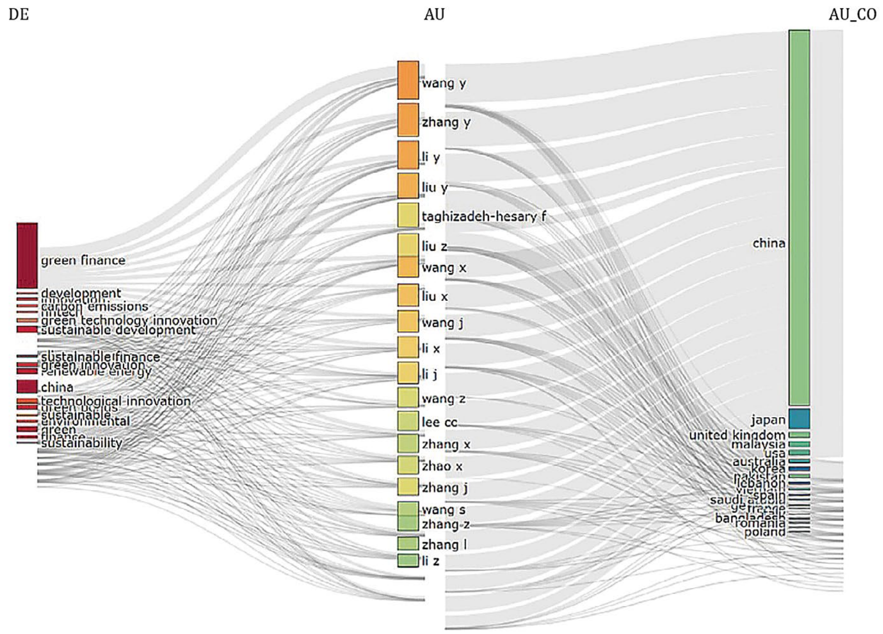
China occupies a dominant position, with 1301 published articles representing 67,03 % of the total analysed articles. Out of these, 999 resulted from SCP and only 302 from MCP, indicating a predominantly domestic research pattern. Although China has the highest absolute number of international collaborations, its relative proportion of international collaborations (21,3 % of total publications) is significantly lower than that of other countries in the ranking. In contrast, countries such as Pakistan, Malaysia, and France are more actively involved in international collaborations, with over 65 % of their research conducted with foreign partners—an externally oriented approach that is often a strategic necessity for resource-constrained countries.

Countries like the United Kingdom, Australia, and the USA maintain a balanced SCP–MCP ratio, reflecting robust domestic research capacity complemented by consistent international engagement. This balanced collaboration pattern may serve as a model for developing nations aiming to scale their scientific presence while remaining globally relevant. The analysis highlights the structural inequalities within global research systems and underscores the importance of fostering inclusive, cross-border partnerships, especially for emerging economies underrepresented in the green finance literature.

Regarding the interrelationship between keywords, authors, and country of co-authors, the results are shown in Figure 9.

Figure 9

Conceptual Structure in Terms of Keywords



Keyword clustering indicates thematic groupings where specific terms are often associated with the same group of authors and countries. For instance, keywords such as "green finance", "development", and "carbon emissions" often appear in publications from China, Japan, the United Kingdom, and the EU, reflecting the global focus on green finance and environmental concerns. The countries of co-authors play a vital role in shaping these interrelationships. Chinese researchers, for example, frequently collaborate on topics related to green development, mirroring China's growing investment in environmental sustainability. This interconnectedness emphasises the global interest in green finance, where both the geographic distribution of co-authors and the frequency of specific keywords highlight the collaborative and interdisciplinary nature of the field.

5. DISCUSSION

This study used bibliometric analysis to answer the research questions concerning the mapping of collaborative structures, the identification of conceptual and thematic trends in green finance research, and the examination of the relationship between sustainability goals and digital transformation in green finance policy design. In addition, it sought to explore how the literature frames green finance within a paradoxical framework and to what extent current research addresses this tension. A final research question considered how green finance literature identifies and reflects critical gaps and limitations in the practical implementation of sustainable finance mechanisms, particularly in terms of geographic disparities, policy inconsistencies, or institutional misalignments. Together, these questions guide a comprehensive bibliometric approach that not only highlights the evolution of scholarly output on green finance but also uncovers opportunities for future research at the intersection of finance, sustainability, and digital transformation.

The surge in publication volume after 2018 coincides with amplified global efforts toward implementing the SDGs and post-Paris Agreement frameworks. This confirms that green finance has shifted from a niche concern to a central policy instrument. The concentration of keywords such as "green finance policy", "renewable energy", "innovation", and "CO2 emissions" suggests that the field is evolving beyond theorisation toward application and measurement. These results are consistent with the ecological modernisation theory, which holds that environmental enhancement and economic growth can coexist through innovation and institutional change. However, there are still gaps: crucial terms like "adaptation," "transition," and "inclusion" are either conspicuously lacking or underrepresented. This reveals a thematic bias aligned with critiques in the literature (Desalegn & Tangl, 2022; Ozili, 2022) regarding green finance's neglect of social equity dimensions.

The national collaboration networks confirm China's dominant role in terms of quantity and centrality. Nonetheless, China's low percentage of international collaboration (23,21 %) indicates a robust domestic research agenda. On the other hand, Malaysia, France, and Pakistan have higher international co-authorship ratios (above 65 %) despite producing fewer publications, which indicates their reliance on external knowledge systems and collaborative funding. These results are consistent with institutional theory, highlighting how national governance and research policies shape knowledge production. Additionally, some fragmentation is evident in grouping author co-citations into two dominant schools: one concentrating on econometrics and growth, and the other on ESG and innovation. This division may hinder interdisciplinary integration, limiting the capacity of the field to address multi-dimensional sustainability challenges.

Although one of the research questions included exploring the integration of digital transformation and green finance, keyword analysis and clustering reveal limited interaction. Terms such as "blockchain", "AI", "fintech", or "digital platforms" are absent from the most-used terms, signalling an underdeveloped research frontier. Despite the promise of these technologies, the lack of theoretical and empirical convergence between digital and green finance undermines the potential for scalable, transparent, and efficient sustainable investments (Nassiry, 2019; Trukhachev & Dzhikiya, 2023).

6. LIMITATIONS AND FUTURE LINES OF RESEARCH

Although the bibliometric analysis provides a structured picture of the evolution and dynamics of green finance research, several limitations should be mentioned to interpret the results correctly.

First, the selection of bibliographical sources was limited to the WoS database—one of the most widely used platforms for bibliometric assessments—but it does not exhaustively cover all relevant publications in the field. Thus, papers indexed exclusively in alternative databases (such as Scopus, Dimensions, or Google Scholar) were excluded, which may affect the overall coverage of the literature. Second, the analysis period (2015-2024) was chosen to reflect recent research trends but excludes earlier contributions that conceptually grounded the field of green finance. Moreover, articles published in most recent years (e.g., 2023-2024) may have low citation counts due to the lagged effect in scientific recognition, which limits comparability with older works. The analysis was also restricted to scientific articles written in English, which introduces a potential linguistic bias by excluding relevant research published in other languages, especially in the context of emerging regions, where local literature may provide valuable insights into the implementation of green finance. Finally, as with any bibliometric analysis, the study relies mainly on quantitative indicators (number of publications, citations, countries, etc.), without directly capturing the quality or theoretical depth of the contributions. Also, a detailed analysis of the conceptual content of the papers has not been carried out, which limits the ability to assess emerging themes and real research gaps.

7. CONCLUSIONS

This study used bibliometric techniques to provide a comprehensive roadmap of the green finance research landscape between 2015 and 2024, aiming to identify major thematic trends, collaboration networks, and conceptual developments in the field. Beyond capturing intellectual trends, the analysis also identifies emerging directions through which green finance may support sustainable development in a rapidly transforming financial landscape.

The results of the bibliometric analysis reveal a significant increase in the number of studies— including policy decisions and increased researcher interest—in the field of green finance between 2015 and 2024. They provide insights into the evolution and progress of green finance and identify key themes, influential authors, institutions, and geographical regions that have influenced academic research. The main findings highlight that green finance has matured as a research domain, with growing thematic convergence around policy integration, performance metrics, and innovation.

China has played an important role in green finance research, underlining national priorities through its participation in the Paris Agreement and carbon neutrality goals. Although the collaborative network between nations unveiled patterns of international cooperation aimed at addressing collective challenges—such as sustainability and green investments—the co-citation analysis of authors provided valuable insights into the principal contributors within the domain of green finance research and their categorisation into thematic clusters. The co-authorship networks highlight the strong collaborations between researchers in China and Europe, promoting the exchange of concepts and approaches to global environmental challenges and proposing coordinated cross-cutting strategies and policies that require this interconnection. However, the field remains geographically imbalanced, with China dominating output yet showing low international collaboration in terms of the total publications, whereas emerging economies rely more heavily on global networks.

Despite notable progress, several challenges continue to limit the effectiveness of green finance. Significant legislative changes are needed, such as introducing tax incentives and subsidies to encourage private sector participation. Strengthening public–private partnerships could mobilise resources and expertise for green initiatives, while centralising reporting bodies may improve transparency and efficiency. Under these conditions, green finance could become a powerful instrument for promoting a low-carbon economy, propelling international climate action, and accomplishing sustainable development goals.

Although the body of literature is growing, specific areas within green finance remain underexplored. There is a need for more in-depth studies into the long-term impacts of green finance on both global financial stability and environmental sustainability. Future research should also explore the effectiveness of various green finance policies across different national contexts, particularly in developing economies where financial systems may be less robust. Cross-disciplinary collaboration will be crucial in addressing these gaps, as green finance inherently spans multiple domains of expertise.

The conceptual landscape is also marked by a division between econometrics-driven studies and those focused on ESG, governance, and policy mechanisms. This fragmentation underscores the need for greater theoretical integration, particularly by drawing on ecological modernisation and institutional theory, to explain how national systems, regulatory frameworks, and technological readiness shape green finance trajectories.

Crucially, despite the increasing relevance of digital transformation in the financial sector, the bibliometric evidence reveals a surprising lack of integration between digital tools (e.g., fintech, blockchain, AI) and green finance. This gap represents a limitation of current research and a substantial opportunity for future exploration, particularly in designing scalable, transparent, and impact-oriented green finance mechanisms.

This study reaffirms that ecological modernisation theory and institutional theory remain robust lenses for understanding how policy, governance, and innovation merge in green finance. From a practical perspective, the findings suggest the need for targeted policy measures to foster global collaboration and support the adoption of digital infrastructure in sustainability finance. Addressing these gaps may accelerate the alignment of financial systems with sustainability imperatives while enhancing transparency, accountability, and inclusiveness. By combining bibliometric analysis with theoretical grounding in ecological modernisation and institutional frameworks, this study offers a structured roadmap for understanding the evolution of green finance. It also highlights critical areas for further exploration—such as digital finance integration, institutional alignment, and global disparities—thus providing actionable insights for researchers, policymakers, and financial institutions.

Future research should build on this bibliometric roadmap by employing longitudinal and mixed-method designs, expanding data sources beyond WoS, and incorporating underexplored dimensions such as climate adaptation, behavioural finance, and social inclusion. Governments should implement more robust regulations and guidelines to encourage accountability and transparency in green investments, guaranteeing that money is allocated to initiatives with measurable environmental effects. These are only some of the possible policy ramifications associated with green finance. Policymakers might also provide tax breaks, subsidies, or other financial incentives to encourage private sector involvement in sustainable initiatives. Looking forward, the future of green finance research appears promising. With the global emphasis on sustainability and climate resilience, the demand for financial solutions aligned with environmental goals will only increase. Additionally, the intersection between green finance and digital transformation should be prioritised empirically and theoretically as a key area of innovation and policy relevance in the coming years.

STATEMENTS

Data Availability

The data supporting this study are available from the corresponding author upon reasonable request.

Use of Artificial Intelligence

The authors certify that no artificial intelligence tools were used in the preparation, analysis, or writing of this manuscript.

Conflict of Interest

The authors declare no conflict of interest related to this publication.

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Author Contributions (CRediT)

AD: conceptualization, software, validation, resources, writing, original draft, visualization.

CC: conceptualization, methodology, writing, original draft, data curation.

CB: conceptualization, methodology, validation, writing, original draft.

PMS: formal analysis, investigation, supervision, project administration.

ORL: resources, writing, review & editing, supervision, funding acquisition.

Ethical Approval

Not applicable.

Declaration of Originality

The authors declare that this article is an original work that has not been previously published nor is under consideration elsewhere.

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