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Los factores del liderazgo influyentes en el
crecimiento y éxito del emprendimiento
femenino

Tesis Doctoral

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DEDICATORIAS Y AGRADECIMIENTOS

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Este trabajo va dedicado a todas aquellas personas emprendedoras, un ejemplo de valentía, trabajo y esfuerzo, esperando que les pueda resultar de interés.

ABSTRACT

One of the most significant organizational elements identified by the research community for developing entrepreneurship is leadership (Ensley, Pearce & Hmieleski, 2006). For entrepreneurial activities to be successful, leaders require certain leadership factors. When studying these factors, we find that they are located at the intersection of two independent domains, namely leadership and entrepreneurship, and create a new paradigm called entrepreneurial leadership.

This relatively recent construct arises to respond to the challenges and difficulties encountered by entrepreneurs throughout their entrepreneurial activities to overcome them. However, neither a clear definition of entrepreneurial leadership, nor sufficient conceptual and theoretical frameworks, are available. The different definitions tend to focus on entrepreneurial leaders' traits, characteristics and behaviors. Historically, research has analyzed leaders' traits and demographics. Entrepreneurs' age, education and ethnicity are more relevant than what they were, and attention is not normally paid to the entrepreneurship context, i.e., the different phases through which an entrepreneurial activity passes. However, according to the entrepreneurial leadership theory, context is an essential moderator of leader effectiveness.

Furthermore, if we wish to address leadership factors in women's entrepreneurship, there is consistent evidence that leader and entrepreneur are gendered constructs. There is a dominant male bias in the leadership and entrepreneurship fields, and everything about women's entrepreneurship and what can impact its growth deserve to be studied in their own right (Bruin, Brush, & Welter, 2006).

Despite these difficulties, not enough research has been done to better understand what leadership attributes are considered the most important depending on the entrepreneurial process stage, whether they are contextual or universal, let alone gendered. To conclude, it is essential to identify and better understand which leadership factors or skills are most valuable to successfully overcome challenges throughout the entrepreneurial process.

The present doctoral thesis aims to investigate these questions. First of all, with a bibliometric analysis the initial part of this research evidences, with and without a gender focus, that indeed the entrepreneurial leadership construct is a domain with its own identity because relatively recently it suffered from lack of conceptual and theoretical frameworks and empirical models. In addition, when we approach entrepreneurial leadership with a gender lens, there is consistent evidence that standard descriptions of entrepreneurial leaders' characteristics are based on norms and traits with a clear dominant male gender bias. Entrepreneurial leadership discourse tends to move towards the subordination of all those who do not conform to that stereotype.

In the second part of the thesis, through a literature review it identifies the most essential attributes of female entrepreneurial leadership, which will be the basis for building the relational models that are evaluated in the final part. By means of a comprehensive literature review, 267 leadership factors are identified and collected. Thanks to a co-occurrence analysis of the factors, it discovers

that the most frequent are innovation, communication, networking, passion, risk-taking, vision, opportunity, decision making, self-efficacy, the need for achievement, among others. Another contribution is that no gender-differentiated leadership attributes are observed compared to similar studies without a gender focus. As a limitation of this analysis, it is not detected at what times these factors intervene in the different entrepreneurship phases.

The final objective of this doctoral thesis is to analyze how certain combinations of leadership factors impact the different stages of female entrepreneurs' activity in both the launching and start-up phases, and also in the consolidation phase. Therefore, in the last part of this thesis, some of these factors identified in the literature review are used as the exogenous variables that constitute the latent entrepreneurial leadership construct to be used in several relational models. A quantitative method of partial least squares structural equations is used to validate these proposed models. The same analysis is included, but without a gender focus.

As a general conclusion and a main finding, it confirms the positive and significant relation between some leadership capabilities in the early entrepreneurship stage, but not in the consolidation stage, and both with and without a gender lens. With these findings, a twofold contribution to the field is made. The first one is that self-efficacy, perceived opportunities, need for achievement and networking will positively condition the early stage of women's entrepreneurial activity. In the research with a gender focus, factors like vision, innovation capacity, self-efficacy and networking will positively impact the initial launching phase. In both papers, the hypotheses with the same factors are not supported for the more advanced stages of entrepreneurship. This is logical because, if the impact of the above-mentioned factors is important in the initial stages, these factors are probably unnecessary when the company is consolidated and has been operating for some time. In the second one, it reinforces the theory that leadership factors are contextual because they depend on the entrepreneurial process phases.

This work seeks to understand gender experiences in the entrepreneurial leadership context by conferring the field more clarity. This study benefits scholars in the field to advance the contextual approach to entrepreneurial leadership, academic organizations in entrepreneurship, policymakers making better-informed decisions, economic agents seeking to undertake or invest in entrepreneurial activity, and women entrepreneurs themselves to better understand some of the drivers of growth of their new businesses.

RESUMEN

Uno de los elementos organizativos más significativos, identificado por la comunidad investigadora para desarrollar el emprendimiento, es el liderazgo (Ensley, Pearce & Hmieleski, 2006). Para que las actividades emprendedoras tengan éxito, los líderes requieren ciertos factores de liderazgo. A la hora de estudiar esos factores, constatamos que se sitúan en la intersección de dos dominios independientes como son el liderazgo y el emprendimiento, creando un nuevo paradigma: llamado liderazgo emprendedor.

Este constructo relativamente reciente surge para responder a los retos y dificultades que se encuentran los emprendedores a lo largo de sus actividades emprendedoras y poder así superarlos. Sin embargo, todavía no existe una definición clara del liderazgo emprendedor ni tampoco marcos conceptuales y teóricos suficientes. Las diferentes definiciones suelen centrarse en los rasgos, características y comportamientos de los líderes emprendedores. Históricamente, la investigación analiza los rasgos y la demografía del líder. Es más relevante la edad, los estudios o el origen étnico del emprendedor que lo que hace, no se suele prestar atención al contexto del emprendimiento, es decir, a las diferentes fases por las que pasa una actividad emprendedora. Sin embargo, según la teoría del liderazgo emprendedor, el contexto es un importante moderador de la eficacia del líder.

Además, si queremos abordar los factores de liderazgo en el emprendimiento de las mujeres, hay una evidencia consistente de que el líder y el emprendedor son construcciones de género. Existe un sesgo masculino dominante en los campos del liderazgo y el emprendimiento. Y todo lo relativo al emprendimiento femenino y lo que puede impactar en su crecimiento merece ser estudiado por derecho propio (Bruin, Brush, & Welter, 2006).

A pesar de esas dificultades, no se han realizado suficientes investigaciones para comprender mejor qué atributos de liderazgo se consideran más importantes según la etapa del proceso emprendedor, si son contextuales o universales, y menos aún con enfoque de género. En conclusión, es importante identificar y comprender mejor qué factores o habilidades de liderazgo se consideran más valiosos para superar los retos con éxito a lo largo del proceso emprendedor.

Con la presente tesis doctoral se quiere investigar estas cuestiones. En primer lugar, en la parte inicial de este documento se evidencia, a través de un análisis bibliométrico con y sin enfoque de género, que efectivamente el constructo del liderazgo emprendedor es un dominio con identidad propia desde hace relativamente poco tiempo, que adolece de una falta de marcos conceptuales, teóricos y modelos empíricos. En complemento, cuando abordamos el liderazgo emprendedor con lente de género, existe una evidencia consistente de que las descripciones estándar de las características de los líderes emprendedores están basadas en normas y rasgos con claro sesgo de género masculino dominante. El discurso del liderazgo emprendedor tiende a moverse hacia la subordinación de todos aquellos que no se ajustan a dicho estereotipo.

En la segunda parte de la tesis, se identifican, a través de una revisión de literatura, los atributos más importantes del liderazgo emprendedor femenino que serán la base para construir

los modelos relacionales que evaluaremos en la parte final. Mediante una revisión exhaustiva de la literatura, se identificaron y recogieron 267 factores de liderazgo. Gracias a un análisis de co-ocurrencia de los factores, se descubre que los más frecuentes son la innovación, la comunicación, el trabajo en red, la pasión, la asunción de riesgos, la visión, la oportunidad, la toma de decisiones, la autoeficacia y la necesidad de logro, entre otros. Otra de las contribuciones es que no se observan atributos de liderazgo diferentes en función del género cuando se comparan con estudios similares sin enfoque de género. Como limitación de dicho análisis, no se detecta en qué momentos intervienen dichos factores en las distintas fases del emprendimiento.

El objetivo final de la presente tesis doctoral es analizar cómo ciertas combinaciones de factores de liderazgo impactan en las diferentes etapas de la actividad de las emprendedoras, tanto en su fase de lanzamiento y puesta en marcha, como en la de consolidación. Por ello, en la última parte del presente documento, se emplean algunos de esos factores, identificados en la revisión de literatura, como las variables exógenas que constituyen el constructo latente de liderazgo emprendedor que se utilizará en varios modelos relacionales. Para validar esos modelos propuestos, se emplea un método cuantitativo de ecuaciones estructurales de mínimos cuadrados parciales. Se incluye ese mismo análisis, sin enfoque de género.

Como conclusión general y principal hallazgo, se confirma la relación positiva y significativa entre algunas capacidades de liderazgo en la etapa temprana del emprendimiento, pero no en la de consolidación, tanto con lente de género como sin ella. Con estos hallazgos, realizamos una doble contribución al campo. En primer lugar, demostramos que la autoeficacia, la percepción de oportunidades, la necesidad de logro y el trabajo en red, condicionarán positivamente la fase temprana de la actividad emprendedora de las mujeres. En la investigación con enfoque de género, serán los factores como la visión, la capacidad de innovación, la autoeficacia y el trabajo en red, los que impactan positivamente esa fase inicial de lanzamiento. En ambos trabajos, las hipótesis con los mismos factores no se ven respaldadas para las fases más avanzadas del emprendimiento. Esto es lógico, ya que, si el impacto de los factores mencionados es importante en las etapas iniciales, estos mismos factores probablemente no sean necesarios cuando la empresa está consolidada y lleva tiempo funcionando. En segundo lugar, se refuerza la teoría de que los factores de liderazgo son contextuales al depender de las fases del proceso emprendedor.

Con este trabajo se pretende entender las experiencias de género dentro del contexto del liderazgo emprendedor otorgando mayor claridad al campo. Este estudio beneficia tanto los estudiosos del campo para avanzar en el enfoque contextual del liderazgo emprendedor, las organizaciones académicas en materia de emprendimiento, los responsables políticos para tomar decisiones mejor informadas, los agentes económicos que buscan realizar una actividad emprendedora o invertir en ella y las propias emprendedoras para comprender mejor algunos drivers de crecimiento de sus nuevos negocios.

RESUM

Un dels elements organitzatius més significatius, identificat per la comunitat investigadora per a desenrotllar l'emprenedoria, és el lideratge (Ensley, Pearce & Hmieleski, 2006). Perquè les activitats emprenedores tinguen èxit, els líders requereixen certs factors de lideratge. A l'hora d'estudiar eixos factors, constatem que se situen en la intersecció de dos dominis independents com són el lideratge i l'emprenedoria, creant un nou paradigma: cridat lideratge emprenedor.

Este constructe relativament recent sorgix per a respondre als reptes i dificultats que es troben els emprenedors al llarg de les seues activitats emprenedores i poder així superar-los. No obstant això, encara no hi ha una definició clara del lideratge emprenedor ni tampoc marcs conceptuals i teòrics suficients. Les diferents definicions solen centrar-se en les característiques i comportaments dels líders emprenedors. Històricament, la investigació analitza els trets i la demografia del líder. És més rellevant l'edat, els estudis o l'origen ètnic de l'emprenedor que el que fa, no se sol prestar atenció al context de l'emprenedoria, és a dir, a les diferents fases per les quals passa una activitat emprenedora. No obstant això, segons la teoria del lideratge emprenedor, el context és un important moderador de l'eficàcia del líder.

A més, si volem abordar els factors de lideratge en l'emprenedoria de les dones, hi ha una clara evidència de què el líder i l'emprenedor són construccions de gènere. Hi ha un caire masculí dominant en els camps del lideratge i l'emprenedoria. I tot el que es referix a l'emprenedoria per part de les dones i el que pot impactar en el seu creixement mereix ser estudiat per dret propi (Bruin, Brush, & Wèlter, 2006).

A pesar d'eixes dificultats, no s'han realitzat suficients investigacions per a comprendre millor quins atributs de lideratge es consideren més importants segons l'etapa del procés emprenedor, si són contextuals o universals, i menys encara amb enfocament de gènere. En conclusió, és important identificar i comprendre millor quins factors o habilitats de lideratge es consideren més valuosos per a superar els reptes amb èxit al llarg del procés emprenedor.

Amb la present tesi doctoral es pretén investigar aquestes qüestions. En primer lloc, en la part inicial d'aquest document s'evidencia, a través d'una anàlisi bibliomètrica amb i sense enfocament de gènere, que efectivament el constructe del lideratge emprenedor és un domini amb identitat pròpia des de fa relativament poc de temps, que patix d'una falta de marcs conceptuals, teòrics i models empírics. Per tant, quan abordem el lideratge emprenedor amb lent de gènere, hi ha una evidència marcada de què les descripcions estàndard de les característiques dels líders emprenedors estan basades en normes i trets amb clar caire de gènere masculí dominant. El discurs del lideratge emprenedor tendix a moure's cap a la subordinació de tots aquells que no s'ajusten a aquest estereotip.

En la segona part de la tesi, s'identifiquen, a través d'una revisió de literatura, els atributs més importants del lideratge emprenedor femení que seran la base per a construir els models relacionals que avaluarem en la part final. Per mitjà d'una revisió exhaustiva de la literatura, es van identificar i es van arreplegar 267 factors de lideratge. Gràcies a una anàlisi de co-idea dels

factors, es descobreix que els més freqüents són la innovació, la comunicació, el treball en xarxa, la passió, l'assumpció de riscos, la visió, l'oportunitat, la presa de decisions, l'autoeficàcia i la necessitat d'èxit, entre altres. Una altra de les contribucions és que no s'observen atributs de lideratge diferents en funció del gènere quan es comparen amb estudis semblants sense enfocament de gènere. Com a limitació d'aquesta anàlisi, no es detecta en quins moments intervenen els factors assenyalats en les distintes fases de l'emprenedoria.

L'objectiu final de la present tesi doctoral és analitzar com certes combinacions de factors de lideratge impacten en les diferents etapes de l'activitat de les emprenedores, tant en la seua fase de llançament i posada en marxa com en la de consolidació. Per això, en l'última part del present document, s'empren alguns dels factors, identificats en la revisió de literatura, com les variables exògenes que constitueixen el constructe latent de lideratge emprenedor que s'utilitzarà en diversos models relacionals. Per a validar els models proposats, s'empra un mètode quantitatiu d'equacions estructurals de mínims quadrats parcials. S'inclou aquesta mateixa anàlisi, sense enfocament de gènere.

Com a conclusió general i principal troballa, es confirma la relació positiva i significativa entre algunes capacitats de lideratge en l'etapa primerenca de l'emprenedoria, però no en la de consolidació, tant amb lent de gènere com sense ella. Amb estes troballes, realitzem una doble contribució al camp. En primer lloc, demostrem que l'autoeficàcia, la percepció d'oportunitats, la necessitat d'èxit i el treball en xarxa, condicionaran positivament la fase primerenca de l'activitat emprenedora de les dones. En la investigació amb enfocament de gènere, seran els factors com la visió, la capacitat d'innovació, l'autoeficàcia i el treball en xarxa, els que impacten positivament eixa fase inicial de llançament. En ambdós treballs, les hipòtesis amb els mateixos factors no es veuen protegides per a les fases més avançades de l'emprenedoria. Açò és lògic, ja que, si l'impacte dels factors mencionats és important en les etapes inicials, aquests mateixos factors probablement no siguen necessaris quan l'empresa està consolidada i porta temps funcionant. En segon lloc, es reforça la teoria que els factors de lideratge són contextuals al dependre del cicle de vida de l'activitat emprenedora.

Amb aquest treball es pretén entendre les experiències de gènere dins del context del lideratge emprenedor atorgant més claredat al camp. Este estudi beneficia tant els estudiosos del camp per a avançar en l'enfocament contextual del lideratge emprenedor, les organitzacions acadèmiques en matèria d'emprenedoria, els responsables polítics per a prendre decisions millor informades, els agents econòmics que busquen realitzar una activitat emprenedora o invertir en ella i les pròpies emprenedores per a comprendre millor alguns impulsors de creixement dels seus nous negocis.

CHAPTER I. INTRODUCTION

1. INTRODUCCIÓN

El liderazgo es un reconocido impulsor del emprendimiento (Félix, Aparicio, & Urbano, 2019) y éste es un motor clave del crecimiento económico. Para que las actividades emprendedoras tengan éxito, los líderes necesitan ciertas competencias, atributos o factores definidos como capacidades específicas de liderazgo (Cogliser & Brigham, 2004; Gupta, MacMillan, & Surie, 2004; Fernald, Solomon & Tarabishy, 2005). Su contribución se reconoce como un factor de desarrollo o fracaso de las pequeñas y medianas empresas (C. Harrison, Burnard, & Paul, 2018; Leitch & Harrison, 2018; Leitch, McMullan, & Harrison, 2013; Renko, El Tarabishy, Carsrud, & Brännback, 2015; Simba & Thai, 2019) así como de las grandes corporaciones (Kuratko, 2007).

A consecuencia de ello, la investigación sobre el liderazgo en el emprendimiento ha sido objeto de un intenso debate por parte de los académicos para entender el papel de ambos campos temáticos. El emprendimiento y el liderazgo han sido dominios de investigación históricamente separados o incluso paralelos (Cogliser & Brigham, 2004; Gupta, MacMillan, & Surie, 2004; Renko, El Tarabishy, Carsrud, & Brännback, 2015). Sin embargo, a medida que el ámbito de la investigación sobre el emprendimiento se ha ampliado, también lo han hecho áreas de interés transversal como el liderazgo (Lewis, 2015). Por lo que estas disciplinas, tradicionalmente distintas, han convergido en una intersección (Cogliser & Brigham, 2004; Renko et al., 2015) para crear un nuevo paradigma llamado liderazgo emprendedor (Fernald, Solomon, & Tarabishy, 2005). Este constructo reciente, que se beneficia de esa fertilización cruzada (Leitch & Harrison, 2018), ha pasado por varios posicionamientos al ser considerado tanto como un estilo distintivo del liderazgo o, por lo contrario, como un enfoque estratégico del emprendimiento, para llegar más recientemente a una visión más holística. Pero su definición no es clara y como afirman varios investigadores, el campo sigue buscando su identidad (Leitch & Harrison, 2018; Leitch et al., 2013; Renko et al., 2015).

Históricamente, para avanzar en la definición y el concepto del liderazgo emprendedor se ha tratado de explicar los rasgos, las características y los comportamientos de los líderes (R. Harrison, Leitch & Mcadam, 2015) que se consideraban más valiosos a la hora de superar los retos de la gestión de una organización. Sin embargo, hasta la fecha no existe suficiente información sobre cómo estos atributos ayudan a los emprendedores a superar los desafíos y si se pueden aprender (C. Harrison et al., 2018; Kempster & Cope, 2010). Tampoco hay herramientas adecuadas para medir las características y los comportamientos emprendedores de los líderes (Renko et al., 2015) y menos incluyendo el análisis de género (R. Harrison et al., 2015). Además, según Antonakis y Autio (2007), la teoría del liderazgo emprendedor debe considerar el contexto como importante moderador de la eficacia del líder y no solo analizar los rasgos y la demografía del líder (Antonakis & Autio, 2007; Vecchio, 2003).

El contexto específico de una organización puede describirse a través del proceso emprendedor, en el que se manifiestan diferentes factores de liderazgo en función de la fase en la que se encuentra (Antonakis & Autio, 2007; Vecchio, 2003). Como los estudios teóricos y empíricos en ese sentido son escasos (Zaech & Baldegger, 2017), proponemos estudiar estos

factores en diferentes etapas del proceso emprendedor (Gartner, Bird, & Srarr, 1992; Parker, 2011). En la literatura generalmente se identifican tres grandes fases en el proceso emprendedor: el pre-lanzamiento; el emprendimiento naciente o nuevo, o también llamado fase de lanzamiento; y la etapa de post-lanzamiento o de madurez, conocido como fase de consolidación (Baron, 2002; Reynolds & White, 1997). En la Figura 1, mostramos el proceso emprendedor tomado del GEM, que será el utilizado en los modelos empíricos. Como sostienen Kesidou y Carter (2018), se espera que los comportamientos de los emprendedores difieran en las primeras etapas del proceso emprendedor de los observados cuando la empresa se encuentra en una etapa de ciclo maduro (Kesidou & Carter, 2018).

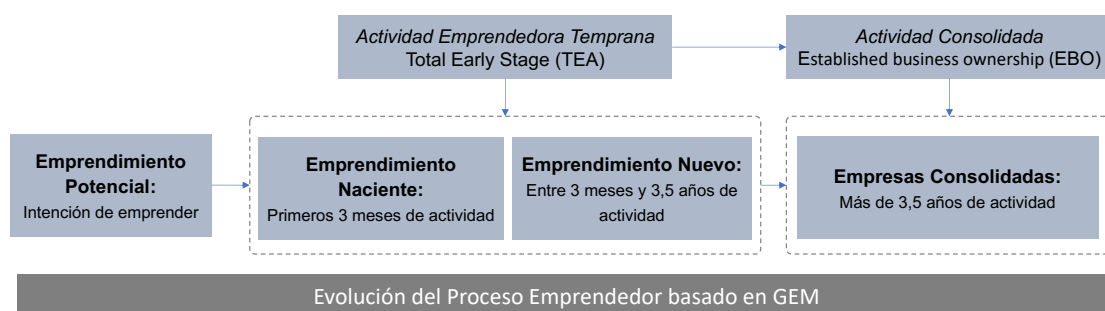


Figura 1. El proceso emprendedor basado en el GEM (fuente: GEM)

Con esta investigación, se obtiene información sobre qué atributos de liderazgo ayudan a las emprendedoras a superar los desafíos del emprendimiento, y cómo estos factores impactan en el crecimiento según la etapa del proceso emprendedor. Se comprenderá si son diferentes y contextuales o si, por lo contrario, son universales para cualquier etapa (Gupta et al., 2004). Al estudiar esos factores para el colectivo de las mujeres emprendedoras para aportar un enfoque más plural (Kapil & Salgotra, 2018), se constata que el campo del liderazgo emprendedor no se ha visto beneficiado de los avances obtenidos en los campos del emprendimiento y liderazgo en materia de género (R. Harrison, Leitch, & Mcadam, 2015). Tradicionalmente, existe una evidencia consistente de un sesgo masculino dominante dentro de las esferas de los estudios sobre emprendimiento y liderazgo que ha impregnado sus múltiples dimensiones, abarcando la práctica y la participación a través del discurso, los modos de comprensión y la exploración (Patterson, Mavin & Turner 2012). Las descripciones estándar de las características de los líderes emprendedores están basadas en normas y rasgos masculinos (Ahl, 2006; Calás, Smircich, & Bourne, 2009; Dean & Ford, 2017; Lewis, 2015; Patterson, 2021;). El discurso del campo también tiende a moverse hacia la subordinación de todo aquello que no se ajusta a dicho estereotipo (Calás et al., 2009) haciendo invisibles las dimensiones de género (Henry, Foss, Fayolle, Walker, & Duffy, 2015). Explorar el género en el contexto del liderazgo emprendedor nos permite mirar la disciplina desde nuevas y diferentes perspectivas al reconocer mejor las experiencias de liderazgo en el emprendimiento de las mujeres (Carter, Marlow & Bennett, 2012).

Con la presente tesis queremos abordar estas lagunas críticas y explorar el concepto del constructo de liderazgo emprendedor de las mujeres, así como estudiar su impacto en las distintas fases del proceso emprendedor.

2. OBJETIVOS DE LA INVESTIGACIÓN

El objetivo principal de esta tesis doctoral es investigar si determinados factores de liderazgo impulsan el crecimiento del emprendimiento femenino, conocer cuáles son esas posibles combinaciones de factores y si se manifiestan a lo largo de todas las fases del proceso emprendedor.

Los objetivos específicos de esta tesis doctoral son:

1. Obtener una visión general del campo de los factores del liderazgo emprendedor, con y sin enfoque de género, para comprender la estructura, la base fundacional y la tendencia de este campo (Capítulo II - artículos 1 y 2).
2. Identificar y analizar los factores del liderazgo en el emprendimiento femenino obtenidos mediante una revisión bibliográfica exhaustiva (Capítulo III - artículo 3).
3. Construir un modelo relacional para representar el impacto de dichos factores de liderazgo en las diferentes fases del emprendimiento, con y sin perspectiva de género (Capítulos IV y V - artículos 3 y 4).
4. Validar estos modelos conceptuales para entender si determinados factores de liderazgo impactan positivamente en las fases de lanzamiento y de consolidación del emprendimiento (Capítulos IV y V - artículos 3 y 4).

Estos objetivos se han alcanzado mediante las siguientes etapas:

1. Un análisis bibliométrico con perspectiva de género y otro sin este enfoque, para comprender el punto de partida y el enfoque adoptado por los investigadores.
2. Un estudio del estado del arte, gracias a una revisión exhaustiva de la literatura sobre liderazgo emprendedor femenino, para detectar los factores de liderazgo más relevante en la literatura
3. Un trabajo de identificación y análisis de los factores de liderazgo más co-ocurrentes en la literatura.
4. La construcción de modelos relacionales con determinados factores de liderazgo en función de las fases de lanzamiento y consolidación del emprendimiento, con y sin enfoque de género.
5. La validación de los modelos, a través de la metodología de ecuaciones estructurales por el método de mínimos cuadrados parciales (PLS-SEM), para determinar si existe una relación positiva entre los factores del liderazgo emprendedor y la fase de lanzamiento del emprendimiento o la de consolidación.
6. Publicación y/o envíos de los resultados a revistas con factor de impacto, y a congresos internacionales.

3. DESARROLLO DE LA TESIS

Para desarrollar la presente tesis se han realizado nueve trabajos académicos, de los cuales se muestran los cinco más relevantes en forma de capítulos descritos a continuación.

Chapter I. Introduction

Esta sección incluye la introducción y motivación de esta tesis, así como los objetivos principales. Adicionalmente, se explica la metodología empleada y los resúmenes de los artículos incluidos en este documento.

Chapter II. Entrepreneurial leadership factors: a bibliometric analysis for the 2000-2020 period.

Este capítulo presenta el artículo publicado “Entrepreneurial leadership factors: a bibliometric análisis for the 2000-2020 period” que incluye un análisis bibliométrico para entender la estructura de los principales actores que publican en el campo del liderazgo emprendedor y las relaciones existente entre ellos. Los resultados muestran que este dominio es relativamente joven y ha sido reconocido con identidad propia por la comunidad científica desde 2018. El discurso dominante sobre el liderazgo emprendedor lo tiene Estados Unidos e Inglaterra, al ser los países más publicadores e influyentes. El estudio se ha publicado en *Management Letters/Cuadernos de Gestión* que es una revista indexada en SCImago Journal & Country Rank (CiteScore₂₀₂₁=1.7/ SJR_{Economics} = Q2/ SJR₂₀₂₁=0.24). Este capítulo aborda el Objetivo 1 de esta tesis.

Chapter III. Female entrepreneurial leadership factors

El propósito del artículo de este capítulo “Female entrepreneurial leadership factors” es comprender la estructura general y las bases de la investigación de los factores del liderazgo emprendedor femenino. Para ello, aplicamos el método bibliométrico a la literatura para conocer la tendencia de las publicaciones, autores, países y revistas, entre otros, en términos de productividad e influencia. Es importante comprender el punto de partida y el enfoque adoptado por los investigadores del campo. Los principales hallazgos muestran que se ha reproducido los mismos errores de sesgo de género de la investigación tradicional sobre el emprendimiento y el liderazgo y no se ve beneficiado de los avances realizados. El artículo ha sido aceptado en *International Entrepreneurship and Management Journal*, revista de la editorial Springer indexada en Social Sciences Citation Index (IF₂₀₂₀=5.940/ JCR= Q2), en SCImago Journal & Country Rank (SJR₂₀₂₁=1.58/ Q1), EBSCO, ProQuest, entre otros. Esta sección aborda el Objetivo 1 y 2.

Chapter IV. The most important leadership factors in Female entrepreneurship

Este estudio presenta una identificación y posterior análisis de co-ocurrencias de los factores del liderazgo de las emprendedoras obtenidos mediante una revisión sistemática de la literatura, a partir de la colección principal de la Web of Science (WoS) con el software Vosviewer. Pretende aportar al campo un conocimiento actualizado de dichos factores de liderazgo de las emprendedoras y ofrecer recomendaciones para futuras investigaciones. Este artículo se encuentra aceptado y presentado a la *International Conference of Entrepreneurship, Education and Digital Transformation 2022*, Tecnológico de Costa Rica (TEC). Este capítulo trata el Objetivo 2.

Chapter V. How leadership factors impact different entrepreneurship phases: an analysis with PLS-SEM

En este capítulo exploramos cómo estos atributos de liderazgo impactan en el proceso emprendedor sin enfoque de género: por un lado, en su etapa de lanzamiento y, por otro, en su etapa de consolidación. Para ello, se realiza un estudio empírico con dos modelos relacionales para validar unas hipótesis causales sobre la combinación de algunos factores de liderazgo y su impacto en las diferentes etapas del proceso emprendedor. Se realiza a través de la modelización de ecuaciones estructurales por mínimos cuadrados parciales (PLS-SEM). El artículo se encuentra aceptado, pero con revisiones en la revista *Journal of Business Economics and Management*, de la editorial Taylor & Francis Online indexada en Social Sciences Citation Index (IF₂₀₂₀= 2. 280/ JCR= Q2), en SCImago Journal & Country Rank (SJR₂₀₂₀ = 0,49/ Q1), EBSCO, ProQuest, Directory of Open Access Journals (DOAJ), entre otros. En este capítulo se trabajan los Objetivos 3 y 4.

Chapter VI. How do leadership factors impact different female entrepreneurship stages?

Con el artículo “How do leadership factors impact different female Entrepreneurship stages” pretendemos investigar si determinados factores de liderazgo impulsan el crecimiento del emprendimiento femenino, conocer cuáles son esas posibles combinaciones de factores y si se manifiestan en las distintas fases del proceso emprendedor. Este estudio explora, a través de dos modelos relacionales, el posible impacto de distintos factores de liderazgo en la etapa de lanzamiento y en la etapa de consolidación, desde una perspectiva de género. Para ello, se trata de validar hipótesis para los modelos causales mediante la modelización de ecuaciones estructurales por mínimos cuadrados parciales (PLS-SEM). El artículo se encuentra enviado y sometido a revisión por pares en la revista *Economic Research-Ekonomska Istraživanja* de la editorial Taylor & Francis Online indexada en Social Sciences Citation Index (IF₂₀₂₀= 3.034/ JCR= Q2), en SCImago Journal & Country Rank (SJR₂₀₂₀ = 0.513/ Q1), EBSCO, ProQuest, Directory of Open Access Journals (DOAJ) entre otros. Este capítulo aborda los objetivos 3 y 4 de la tesis.

Chapter VII. General conclusions and future work

Este capítulo recoge las conclusiones principales de las investigaciones realizadas, las limitaciones existentes, así como los futuros estudios que se podrían desarrollar a partir del presente trabajo.

Appendix

Esta sección incluye en el apéndice I, todos los factores de liderazgo en el emprendimiento de las mujeres ordenados por autores obtenida mediante la revisión de literatura. En el apéndice II, se incluye la lista de todas las publicaciones realizadas enviadas a las revistas y congresos.

4. METODOLOGÍA

La presente investigación doctoral se presenta a través de un compendio de cinco artículos publicados, aceptados o sometidos, pero se fundamenta en el resultado de nueve trabajos de investigación. La investigación completa incluye dos artículos, uno publicado y el otro aceptado, un tercer artículo se encuentra aceptado con modificaciones y un cuarto artículo está sometido a revisión, todo ellos en revistas indexadas. Además, dos proceedings académicos internacionales están publicados y otros dos aceptados, y un quinto publicado a nivel nacional. Los cinco trabajos presentados en esta tesis doctoral emplean una metodología diferente en función del grado de avance de la investigación y se presenta a continuación.

4.1- Análisis bibliométrico

Los métodos bibliométricos son reconocidos como especialidades científicas, que forman parte integral de la metodología de evaluación y cuantificación de la investigación, especialmente en los campos científicos y aplicados (Ellegaard & Wallin, 2015), y se emplean cada vez más para estudiar diversos aspectos de las ciencias sociales (Hood & Wilson, 2001) como la gestión empresarial (Gaviria-Marín, 2021), el emprendimiento (Luor, Lu, Yu, & Chang, 2014) y la innovación (Cancino, Merigó, Coronado, Dessouky, & Dessouky, 2017).

En la presente tesis, el propósito de usar esta metodología es evaluar dónde se encuentra el foco de investigación influyente más activo sobre los factores del liderazgo emprendedor y obtener una visión general de la estructura general, las bases fundacionales y la tendencia del campo. Se aplica la metodología bibliométrica con dos enfoques: un análisis de rendimiento científico y el mapeo gráfico del campo (Cobo et al., 2011; Gaviria-Marín, 2021). El primero, permite conocer la tendencia de las publicaciones en términos de productividad e influencia, a través de la evaluación del impacto y citas de la producción científica, para determinadas variables como autores, universidades, artículos, países y revistas. Se contemplan también indicadores como el índice-h o los factores de impacto. El segundo enfoque incluye la cartografía gráfica del campo para mostrar los aspectos estructurales y dinámicos de la investigación científica, examinando las redes creadas en base a los datos bibliográficos y palabras clave. La complementariedad de ambos enfoques permite construir una imagen global de un campo de investigación específico y conocer su evolución, identificando las áreas de interés actual que se

emplean dentro de los marcos teóricos y empíricos (Gaviria-Marín, 2021; Merigó, Gil-Lafuente, & Yager, 2015).

Los dos enfoques se usan de forma combinada en los dos artículos de los capítulos I y II. Previamente, se han obtenido dos bases de datos, la primera sin enfoque de género con 1.594 documentos y la segunda con 183 publicaciones procedentes de la colección principal de la WoS. Se ha tratado dar respuesta a preguntas cómo: cuáles son artículos más citados y constituyen la base intelectual, qué autores estudian este tema, qué grupos de investigadores se han formado y desde qué enfoques de investigación, qué tipo de revistas publican y desde qué países, y en qué grandes áreas de conocimiento, se está catalogando este campo. Además, se han buscado las posibles lentes y prismas a través de los cuales se han realizado las investigaciones sobre liderazgo emprendedor femenino. Al ser el liderazgo emprendedor una disciplina emergente, se decide realizar dos estudios bibliométricos, uno sin enfoque de género y otro sobre las mujeres, a partir de las dos bases bibliográficas obtenidas de la Web of Science siguiendo las recomendaciones de Callahan (Callahan, 2010).

4.2- Revisión bibliográfica y análisis de co-ocurrencias de palabras

Una vez analizada la visión general del campo estudiado, se realiza una revisión bibliográfica para obtener la base relevante de literatura de dónde obtendremos los principales factores de liderazgo del emprendimiento femenino. Una vez recopilados, se procederá a analizar esos factores que son los que nos van a permitir construir los modelos relacionales propuestos en esa tesis doctoral. El artículo 3 del capítulo IV recoge esa metodología que se detalla a continuación.

En la etapa 1, se lleva a cabo un análisis exhaustivo de la colección principal de las bases de datos WoS para buscar y seleccionar cualquier publicación relacionada con los atributos de liderazgo emprendedor de las mujeres. Una revisión de literatura es un método reconocido para proporcionar “conocimiento fiable a partir de un enfoque basado en la evidencia” (C. Harrison & Burnard, 2016), está bien establecido como enfoque metodológico apropiado en el campo del emprendimiento (Pittaway & Cope, 2007) y es muy útil cuando se trata de grandes volúmenes de evidencia durante largos períodos de tiempo. Debido a la dispersión de la bibliografía sobre el campo estudiado, una revisión exhaustiva posiblemente limita la exclusión de la literatura, al mismo tiempo que refina el enfoque a las contribuciones pertinentes, por lo que es, sin duda, el método de evaluación más adecuado debido a su metodología rigurosa y reproducible que minimiza el sesgo de los investigadores (Denyer & Tranfield, 2009). La revisión aplicada se inspiró en el enfoque de Sanahuja y Ribes (2015) (Sanahuja-Vélez & Ribes-Giner, 2015). Tras obtener la base bibliográfica pertinente formada por 71 artículos, se realizó una revisión de cada artículo para extraer e identificar los factores de liderazgo de las mujeres en el emprendimiento y procesar los datos.

Siguiendo un procedimiento deductivo, la etapa 2 recoge los datos mediante el análisis exhaustivo de cada uno de los artículos obtenidos en la Etapa 1 para responder a la pregunta de investigación “¿cuáles son los factores del liderazgo emprendedor de las mujeres en la literatura?”. Setenta artículos respondieron a la pregunta obteniendo 267 descriptores. Todos los

factores identificados y recogidos fueron organizados por sus autores y se encuentran en el Appendix 1.

En la tercera etapa, se realizó un análisis y visualización de los factores emergentes del liderazgo emprendedor de las mujeres con el software gratuito de análisis bibliométrico VOSviewer (Visualization Of Similarities), ampliamente utilizado a nivel internacional (Guo et al., 2019). El análisis permite analizar las co-ocurrencias de palabras clave e identificar las relaciones e interacciones entre los temas investigados para luego mapear la fuerza de las asociaciones entre ellos en los datos textuales, y obtener finalmente las tendencias de investigación (Cantos-Mateos, Zulueta-García, Vargas-Quesada, & Chinchilla-Rodríguez, 2013).

4.3- Modelo de ecuaciones estructurales – Mínimos cuadrados parciales (SEM-PLS)

En los capítulos V y VI, se proponen dos modelos relacionales con unas hipótesis de investigación que se analizan mediante el empleo de ecuaciones estructurales (SEM) basado en el análisis de la varianza (Hair et al., 2017). Concretamente se utiliza la técnica de modelización path de mínimos cuadrados parciales (Partial Least Squares- PLS) (Roldán & Sanchez-Franco, 2012). El PLS-SEM es un método analítico de valor que evalúa tanto la explicación como la predicción en la prueba de los modelos teóricos (Criado-Gomis, Iniesta-Bonillo, & Cervera-Taulet, 2018; Hair, 2021). Esta metodología se emplea con fines principalmente explicativos y predictivos, y también confirmatorios, exploratorios o descriptivos (Benitez, Henseler, Castillo, & Schuberth, 2020; Chin et al., 2020). Gracias a esa metodología, se estudian las variables de medida y cómo conforman los constructos, y a su vez, cómo estos constructos se interrelacionan entre sí. De esta manera, se comprueba si el modelo teórico está soportado o no, por lo datos utilizados. Algunos de los aspectos principales de este enfoque es que no requiere ninguna uniformidad de las métricas de las variables, y puede estimar modelos con muestras pequeñas, siempre que sean representativas de una población y sin olvidar las reglas estadísticas básicas de validez (Petter & Hadavi, 2021).

En nuestra investigación, el PLS permite evaluar la fiabilidad y la validez de los modelos de medida de cada constructo teórico establecidos en los dos modelos propuestos. Además, permite realizar una estimación del signo y significatividad de las diferentes relaciones hipotetizadas entre los constructos del modelo estructural. Nuestra investigación siguió los pasos sugeridos por Henseler et al. (2016) (Henseler, Hubona, & Ray, 2016).

En primer lugar, se construyó una red nomológica con los constructos y las variables implicadas, para representar las relaciones path del constructo formado por la variable latente no observable, el liderazgo emprendedor, y los indicadores exógenos, y entre el constructo con su indicador endógeno.

En segundo lugar, se evaluó tanto la validez como la fiabilidad del modelo de medida. El modelo de medida pretende determinar si las variables observables miden con precisión las ideas teóricas. En los modelos propuestos, las variables son reflexivas ya que “pueden verse como una muestra representativa de los posibles ítems disponibles dentro del dominio conceptual del

constructo” (Sarstedt, Hair, Ringle, Thiele, & Gudergan, 2016). Para evaluar el modelo de medida en las modalidades reflexivas, las métricas más importantes empleadas son la fiabilidad de consistencia interna, la validez convergente y la validez discriminante (Hair et al., 2017).

Por último, se realizó una evaluación del modelo estructural para determinar si se soportan las hipótesis. Se evalúa la importancia y la magnitud de las relaciones entre las distintas variables con análisis de la colinealidad, el signo, la magnitud y significación del coeficiente del camino, los coeficientes de determinación y el tamaño del efecto.

Para aplicar esta metodología estadística de segunda generación se utilizó el software SmartPLS 3.3.3., que es uno de los principales paquetes de software para el modelado de ecuaciones estructurales basado en PLS (Ringle, Wende, & Becker, 2015).

5. DATOS DEL ESTUDIO Y CARACTERÍSTICAS

En primer lugar, la investigación se desarrolló a través de un análisis bibliométrico donde se detectaron los principales autores, países, artículos y revistas más productivos o influyentes en el desarrollo de estudios en el área de los factores del liderazgo emprendedor con y sin enfoque de género.

Para ejecutar estas investigaciones, se consultó la base de datos WoS que es una plataforma bibliográfica digital que se considera una de las principales bases de datos académicas para evaluar la producción científica mundial (Merigó et al., 2015; Baier-Fuentes, Hormiga, Miravittles, & Blanco-Mesa, 2019). WoS cubre más de 15.000 revistas y 50.000.000 de artículos (Merigó et al., 2015). Aunque existen bases de datos alternativas, se espera que el material incluido en WoS tenga los más altos estándares de calidad (Merigó et al., 2015). Se definieron los términos de búsqueda apropiados utilizando las ecuaciones de búsqueda Topic: (“leader*” and “entrepre*”), combinados con factores o habilidades incluyendo todos los términos relativos: ANDTopic: (“abilit*” or “capabilit*” or “attribut*” or “skill*” or “factor*” or “competenc*” or “behavior*” or “trait*” or “feature*”). La elección de estas palabras clave se basó en la revisión bibliográfica realizada por Harrison y Burnard (2016). Para obtener la base con enfoque de género, se introdujeron nuevos términos claves como AND Topic: (“female” or “gender” or “wom*” or “femin*”). Se definió un período de tiempo amplio, desde el año 2000 hasta el 2020, para analizar los artículos más recientes, pero con un período lo suficientemente largo como para comprender la evolución de la literatura en el campo. El cuarto paso consistió en limitar la búsqueda a la colección principal de WOS utilizando estos índices: SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH, ESCI, CCR-EXPANDED y IC. A continuación, se refinaron los resultados eligiendo únicamente artículos y revisiones y, para no excluir países de autoría, se dejaron los artículos publicados en todos los idiomas.

Los resultados fueron 1.594 documentos de los cuales 1.540 fueron artículos y 54 revisiones, y el 93% de los documentos eran en inglés. Por otra parte, el estudio bibliométrico con enfoque de género obtuvo una base de 183 publicaciones distribuida en 176 artículos y siete revisiones.

En segundo lugar, para llevar a cabo la exhaustiva revisión de literatura se utilizaron los mismos criterios de búsqueda que para el enfoque de género, es decir, la misma base WoS, los

mismos términos de búsqueda y fecha, pero se guardaron únicamente los artículos en inglés. Por lo que se obtuvieron 172 y tras la lectura de resúmenes y la inclusión de artículos seminales se obtuvieron 71 artículos para dicha revisión.

De la revisión bibliográfica, se identificaron 267 atributos entre las mujeres emprendedoras (ver appendix 1) que describen indistintamente ciertos rasgos personales interrelacionados, comportamientos, habilidades, capacidades, valores, experiencia, perspicacia, competencias o conocimientos que a menudo se utilizan indistintamente en la literatura (Smith & Morse, 2015). Este gran número refleja la multiplicidad del concepto y subraya la distinción que se hace entre elementos individuales, organizativos o relacionales.

Finalmente, para trabajar con los modelos relacionales, se tomaron los datos del Global Entrepreneurship Monitor (GEM) que es la mayor encuesta anual sobre emprendimiento, que proporciona datos sobre los patrones y tendencias del emprendimiento en las economías estudiadas (Singer et al., 2015). Con el estudio sin enfoque de género, los datos empleados proceden de la Encuesta de Población Adulta (APS) del “GEM’s Global Entrepreneurship Monitor 2019/2020 Global Report” (Bosma et al., 2020), y para el estudio con enfoque de género del “Women’s Entrepreneurship de 2020-2021: Thriving Through Crisis” (Elam et al., 2021). La APS recoge datos a nivel individual mediante un instrumento de encuesta estandarizado que se administra a muestras representativas de al menos 2.000 adultos de poblaciones adultas de cada país participante, con distintos niveles de desarrollo económico y social para su consolidación por país.

Para la investigación sin enfoque de género, se recopilaron datos entre hombres y mujeres de 18 a 64 años de edad en 50 países de todo el mundo para incorporar diferentes contextos socioeconómicos de los años 2019 y 2020.

Para la investigación con lente de género, los datos de la encuesta APS se recogieron de mujeres de entre 18 y 64 años en 43 países de todo el mundo con diferentes contextos sociales y económicos. El período de recopilación de datos fue de 2020 a 2021 y, por lo tanto, incluye datos en un entorno pandémico con preguntas para capturar los impactos emprendedores del COVID-19, incluyendo preguntas sobre la razón del cierre de negocios, nuevas oportunidades de negocio, expectativas de crecimiento y la calidad del apoyo gubernamental.

6. RESÚMENES EXTENDIDOS DE LOS ARTÍCULOS

Entrepreneurial leadership factors: a bibliometric analysis for the 2000-2020 period

Este estudio presenta una visión general de la investigación sobre los factores, atributos o comportamientos de liderazgo en el emprendimiento a través de un exhaustivo análisis bibliométrico. Se extrajeron del año 2000 a diciembre de 2020, 1594 documentos de la colección principal de la base de datos Web of Science, y se analizaron a través de un estudio bibliométrico utilizando los métodos del análisis de rendimiento y el mapeo científico. Para evaluar la importancia, el impacto y la calidad de las publicaciones se usaron indicadores como la

productividad, el número de citas o el índice-h, entre otros, obteniendo un análisis de tendencias y avances sobre las publicaciones, autores, revistas y países más relevantes. Además, se complementó el análisis gracias a una cartografía científica obtenida mediante técnicas de co-citaciones, acoplamientos bibliográficos, co-ocurrencias y co-autorías.

Los resultados muestran que la tendencia de publicación aumenta significativamente a partir de 2015 y es en 2020, cuando se registra la mayor productividad. Estados Unidos e Inglaterra figuran entre los más países más publicadores e influyentes, aunque un análisis de la red revela cooperaciones entre diferentes países. Aunque la revista más productiva es Sustainability, la más influyente es Journal of Business Venturing. Además, el análisis de palabras clave revela que el término “liderazgo emprendedor” se comienza a utilizar por derecho propio entorno al 2018 como media. Este mapeo sistemático ayuda a ilustrar la evolución temporal de la investigación, identificar las áreas de interés actual para usarla en marcos teóricos y empíricos, y proporcionar una sólida hoja de ruta para la investigación futura.

Female entrepreneurial leadership factors.

Este artículo presenta los fundamentos, la estructura actual y la tendencia de la investigación académica sobre los factores de liderazgo en el emprendimiento femenino, con el fin de proporcionar a los estudiosos del campo una visión general de las direcciones de investigación seguidas y explorar si se reproducen los mismos patrones tradicionales en los estudios de género sobre el emprendimiento y el liderazgo. Para ello, se utilizó un análisis bibliométrico de la base de datos Web of Science del período 2000-2020. Con un análisis de rendimiento de las variables (por ejemplo, autores, publicaciones, revistas y países), y gracias a la cartografía científica, se estudiaron los vínculos entre estas variables. Los resultados muestran que la tendencia de las publicaciones aumentó a partir de 2015, pero con poca influencia y producción. Los países más influyentes y productivos son Estados Unidos y España. El 35% de las revistas tienen su sede en EEUU y el 25% en Inglaterra. Las más influyentes tratan sobre emprendimiento, negocios, gestión y liderazgo. Aunque la base fundacional está influenciada por la autora Ahl, conocida por reclamar nuevas direcciones de investigación relacionadas con las mujeres emprendedoras desde una perspectiva de construcción social, los artículos más influyentes siguen investigando el género con un sesgo masculino dominante. El análisis de la red revela la cooperación entre diferentes países y autores, con un predominio de los Estados Unidos. La ambigüedad del campo del liderazgo emprendedor debido al solapamiento de las disciplinas de emprendimiento y liderazgo se revela a través de la co-citación de revistas de diferentes áreas de especialización: negocios y emprendimiento, gestión y psicología, comportamiento organizativo. Este trabajo proporciona a los investigadores una visión general que los anima a superar la lente normativa masculina dominante desde nuevas perspectivas epistemológicas.

The most important leadership factors in female entrepreneurship

El liderazgo emprendedor es un campo de estudio relativamente reciente, y considerado por muchos académicos como un nuevo paradigma, que merece ser estudiado desde un enfoque de género dado su impacto en el desarrollo del emprendimiento y su rendimiento. Para que las actividades emprendedoras tengan éxito, se necesitan factores de liderazgo específicos. Sin embargo, aún no existe suficiente literatura que identifique claramente estas capacidades o comportamientos de liderazgo, manifestados durante el proceso emprendedor, con un enfoque de género. Esta investigación propone identificar los atributos más importantes del liderazgo empresarial femenino a través de varias etapas. Mediante una revisión sistemática de la literatura se identificó una base de 71 artículos. Luego, tras una revisión exhaustiva, se identificaron y recogieron 267 factores de liderazgo. Finalmente, un análisis de ocurrencia de los factores indicó que los más frecuentes eran la innovación, la comunicación, el trabajo en red, la pasión, la asunción de riesgos, la visión, la oportunidad, la toma de decisiones, la autoeficacia, la necesidad de logro, entre otros. Sin embargo, los resultados revelaron que aún no se ha alcanzado un consenso sobre la base teórica y conceptual del concepto y sus factores propios. Este trabajo pretende aportar conocimientos fiables desde un enfoque basado en la evidencia y actualizar la información sobre las capacidades de liderazgo empresarial aportando una visión más completa gracias a la perspectiva de género y proponiendo recomendaciones para el futuro.

How leadership factors impact different entrepreneurship phases: an analysis with PLS-SEM.

Este trabajo de investigación contribuye empíricamente al campo del liderazgo emprendedor analizando cómo ciertas combinaciones de factores de liderazgo impactan en la actividad emprendedora tanto en su fase de lanzamiento como de consolidación. Se proponen dos modelos relacionales para estudiar si los factores de liderazgo emprendedor están positivamente relacionados con las diferentes etapas del proceso emprendedor. El primero analiza el efecto en las fases de lanzamiento y puesta en marcha del emprendimiento, y el segundo examina el impacto en la etapa de consolidación del emprendimiento. Utilizando datos de 50 países del Global Entrepreneurship Monitor, se empleó un método cuantitativo de ecuaciones estructurales de mínimos cuadrados parciales para validar los modelos propuestos. La principal conclusión fue que el uso de algunas capacidades de liderazgo tiene una influencia desigual en el emprendimiento durante su ciclo de vida. Este estudio contribuye a este campo de dos maneras: en primer lugar, mostramos que los factores de liderazgo son contextuales, y su contribución depende de la fase del proceso emprendedor en la que se encuentre la actividad; en segundo lugar, esta investigación revela que el desarrollo de factores de liderazgo, como la autoeficacia, la creación de redes, la visión y el comportamiento innovador, condicionan positivamente las fases de inicio y lanzamiento de la actividad emprendedora. Los resultados de esta investigación demuestran importantes implicaciones teóricas y empíricas al cubrir las lagunas existentes en el ámbito de los factores de liderazgo emprendedor.

How do leadership factors impact different female entrepreneurship stages?

Con esta investigación se contribuye conceptual y empíricamente al campo del liderazgo emprendedor femenino. El objetivo es analizar, a través de dos modelos relacionales, cómo ciertas combinaciones de factores de liderazgo impactan en las diferentes fases del emprendimiento de las mujeres tanto en su fase de lanzamiento y puesta en marcha, como en la de consolidación en un contexto de COVID. Utilizando datos de 43 países del Women's Entrepreneurship 2020/21 del Global Entrepreneurship Monitor, se empleó un método cuantitativo de ecuaciones estructurales de mínimos cuadrados parciales para validar los modelos propuestos. Se confirmó, como principal hallazgo, la relación positiva y significativa entre algunas capacidades de liderazgo en la etapa temprana del emprendimiento femenino, pero no en la de consolidación. Con este estudio hacemos una doble contribución al campo. En primer lugar, demostramos que el desarrollo de factores de liderazgo como la autoeficacia, la percepción de oportunidades, la necesidad de logro, el trabajo en red y éste en un contexto de COVID, condicionará positivamente la fase temprana del proceso emprendedor femenino. En segundo lugar, se refuerza la teoría de que los factores de liderazgo son contextuales al depender de las fases del proceso emprendedor de las mujeres. Este trabajo confiere mayor claridad al campo contribuyendo a aclarar las lagunas existentes en el marco conceptual de los factores de liderazgo emprendedor de las mujeres.

7. LISTADO DE PUBLICACIONES

Los resultados de la investigación global están diseminados en los siguientes artículos indexados en JCR, SJR y congresos internacionales y nacionales:

Artículos en revistas indexadas en JCR y SJR

[Artículo 1] Aparisi-Torrijo, Sofía; Ribes-Giner, Gabriela. (2022). **Entrepreneurial leadership factors: a bibliometric analysis for the 2000-2020 period**. Management Letters/Cuadernos de Gestión, (22) 2, 45-60. <https://doi.org/10.5295/cdg.211456sa>. (SJR₂₀₂₁=0.24/ SJR_{Economics} = Q2). Este artículo se presenta en el capítulo II.

[Artículo 2] Aparisi-Torrijo, Sofía; Ribes-Giner, Gabriela. (2022). **Female entrepreneurial leadership factors**. International Entrepreneurship and Management Journal. (IEMJ-D-21-00390R2/ aceptación del artículo por parte de la revista con fecha del 16/03/2022) (En JCR: IF₂₀₂₀=5.940/ JCR= Q2 y en SCOPUS: SJR₂₀₂₁=1.58/ Q1).

Este artículo se presenta en el capítulo III.

[Artículo 3] Aparisi-Torrijo, Sofía; Ribes-Giner, Gabriela; Chaves-Vargas Joana-Carolina. (2022). **How leadership factors impact different entrepreneurship phases: an analysis with pls-sem**. Journal of Business Economics and Management. (Presentado 26 de enero y aceptado

con revisiones y reenviado el 14/04/2022) (En JCR: IF₂₀₂₀= 2. 280/ JCR= Q2 y en SCOPUS: SJR₂₀₂₀ = 0,49/ Q1).

Este artículo se presenta en el capítulo V.

[Artículo 4] Aparisi-Torrijo, Sofía; Ribes-Giner, Gabriela. (2022). **How do leadership factors impact different female entrepreneurship stages?** Economic Research-Ekonomska Istraživanja. (Enviado a revista y aceptado a revisión por pares el 24/03/2022) (En IF₂₀₂₀= 3.034/ JCR= Q2 y en SCOPUS: SJR₂₀₂₀ = 0.513/ Q1).

Este artículo se presenta en el capítulo VI.

Congresos Internacionales

[Congreso 1] Aparisi-Torrijo, Sofia; Ribes-Giner, Gabriela (2021). **Impacto de los factores de liderazgo en el crecimiento del emprendimiento propuesta de un modelo relacional.** EN *IX Congreso Internacional de Emprendimiento e Innovación (AFIDE 2021)*. (135 – 140). Online: Dykinson. ISBN: 978-84-1377-995-9

[Congreso 2] Aparisi-Torrijo, Sofia; Ribes-Giner, Gabriela; Chaves-Vargas Joana-Carolina. (2021). **Los factores de liderazgo en el emprendimiento una comparación bibliométrica con y sin enfoque de género.** En *IX Congreso Internacional de Emprendimiento e Innovación (AFIDE 2021)*. (99-106) Online: Dykinson. ISBN: 978-84-1377-995-9

[Congreso 3] Aparisi-Torrijo, Sofía; Ribes-Giner, Gabriela. (2022). **The most important leadership factors in female entrepreneurship.** International Conference of Entrepreneurship, Education and Digital Transformation 2022”. Tecnológico de Costa Rica (TEC). (Aceptado a falta de publicar los proceedings).

Este artículo se presenta en el capítulo V.

[Congreso 4] Aparisi-Torrijo, Sofía; Ribes-Giner, Gabriela. (2022). **The impact of leadership factors on the nascent stage of female entrepreneurship.** International Conference of Entrepreneurship, Education and Digital Transformation 2022”. Tecnológico de Costa Rica (TEC). (Aceptado a falta de publicar los proceedings)

[Simposio 5] Aparisi-Torrijo, Sofía; Ribes-Giner, Gabriela. (2022). **Identificación y análisis de contenido de los factores de liderazgo de las mujeres emprendedoras.** Symposium de Investigadores Predoctorales de Organización de Empresas, Universitat Politècnica de Valencia. ISBN: 978-84-09-34685-1-799-0.

CHAPTER II. ENTREPRENEURIAL LEADERSHIP FACTORS: A BIBLIOMETRIC ANALYSIS FOR THE 2000-2020 PERIOD

Article 1

Entrepreneurial leadership factors: a bibliometric analysis
for the 2000-2020 period

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Clasificación: SCOPUS SJR₂₀₂₁=0.24/ Economics Q2.

Entrepreneurial leadership factors: a bibliometric analysis for the 2000-2020 period

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ABSTRACT

This work aims to present an overview of the factors, attributes or behaviour of entrepreneurial leadership research with a comprehensive bibliometric analysis. 1,594 articles, dated from 2000 to December 2020, were taken from the main Web of Science database collection and analysed with a bibliometric study using performance analysis and scientific mapping methods. To evaluate the importance, quality and impact of publications, indicators like productivity, citations or h-index were used to obtain an analysis of trends and advances on the most relevant publications, authors, journals and countries. Research was complemented by scientific mapping obtained through co-citations, bibliographic couplings, co-occurrences and co-authorships. The results show that the trend of publications has considerably increased since 2015, and the highest productivity was recorded in 2020. The USA and England are two of the most influential publishing countries, although the network analysis reveals cooperation with different countries. The most productive journal is Sustainability and the most influential is the Journal of Business Venturing. This systematic mapping of the field helps to illustrate the research evolution over time, identifies areas of current interest for use in theoretical and empirical frameworks, and provides a solid roadmap for future research. The keyword analysis reveals that the term “entrepreneurial leadership” started to be used in its own right from around 2018 on average.

Keywords: Bibliometric Analysis, Entrepreneurial Leadership, Leadership Factors, Entrepreneurship, Co-citation.

1. INTRODUCTION

Research into entrepreneurship and leadership acknowledges the contribution of both fields as crucial factors in the success or failure of small- and medium-sized enterprises (Leitch et al. 2013; Renko et al. 2015; Ng et al. 2016; Leitch and Harrison 2018; Simba and Thai 2019), and large corporations (Kuratko 2007). Hence the growing interest in the “new paradigm” of entrepreneurial leadership (EL) (Fernald et al. 2005).

EL is defined as “leadership that creates visionary scenarios that are used to assemble and mobilise a “supporting cast” of participants who become committed by the vision to the Discovery and exploitation of strategic value creation” (Gupta et al. 2004, p. 247) and as “making efficient use of available resources, along with discovering and utilizing new resources with respect to the leadership vision” (Hejazi et al. 1993, p. 71). Renko et al. (2015) later defined the concept as the process of “influencing and directing the performance of group members toward the achievement of organizational goals that involve recognizing and exploiting entrepreneurial opportunities”. For others, EL is defined as a partnership of entrepreneurship and leadership functions that produces a new product, service, or the overall development of the organisation (Kapil and Salgotra 2018).

The success of entrepreneurial activities requires the leader having certain competencies, attributes, skills or factors, defined as specific leadership capabilities (Cogliser and Brigham 2004; Gupta et al. 2004; Fernald et al. 2005). It is vital to identify and better understand which EL factors are considered the most valuable to overcome the challenges of managing an organisation, a project or a product, which will influence the venture's success and growth. To date, however, information about the knowledge, understanding and identification of these EL attributes, how they have been able to help entrepreneurs to overcome challenges, and whether these attributes can be learned or exercised, is insufficient (Kempster and Cope 2010; Harrison et al. 2016; Harrison et al. 2018).

For this reason, the research work aims to conduct and present a bibliometric analysis of the literature on EL factors to provide updated knowledge of this field by identifying variables like the publications, authors, countries and sources that investigate it. By presenting certain indicators, such as citation structure, productivity, h-index, among others, it allows us to understand the evolution and trends in the field of these variables. By means of graphic maps of the bibliometric networks of these items, we seek to visualise their links with techniques, such as co-citation, bibliographic coupling, co-authorship and co-occurrences of keywords.

This study is organised as follows. The first part examines the employed bibliometric methods and software, along with their purpose, to explain the search methodology followed to obtain the studied database. Section two presents the results with a study of publications, authors, countries, journals and research areas, which are structured according to number of items, and to their citation structure and evolution over time. A detailed graphical network analysis of the bibliographic data using the VOSviewer software is also included. Finally, the main research debates, conclusions and limitations are addressed after identifying possible future research lines.

2. BIBLIOMETRIC METHOD

The methodology employed in this research is the bibliometric analysis, which is a recognised scientific speciality.

Bibliometric studies form an integral part of the methodology for evaluating and quantifying research (Ellegaard and Wallin 2015). The bibliometric technique provides a representative overview of the state of research in various scientific disciplines.

It usually applies different procedures, such as the scientific performance analysis or graphical mapping of the field (Gaviria-Marín 2021). In recent years however, it has been extremely productive in the business and management field (Gaviria-Marín 2021).

By means of quantitative statistical techniques, the first approach aims to analyse (Pritchard 1969; Broadus 1987; Cancino et al. 2017; Merigó and Yang 2017), the scientific performance of a set of bibliographic documents, their authors, their country of origin (Bonilla et al. 2015), the most representative institutions or journals (Thongpapanl 2012), among others, and their evolution over time. This is done by data collection and management, based on the analysis of indicators like productivity and citations (Wallin 2005; Martínez et al. 2014), the h-index (Hirsch 2005; Alonso et

al. 2009) or the impact factor (IF) of publishing journals (Garfield 1972), which provide an insight into a particular research field (Merigó et al. 2015). The h-index was introduced by Hirsch (Hirsch 2005) It has become one of the main bibliometric indices to assess a researcher's scientific performance (Alonso et al. 2009) by taking into account the number and impact of his/her publications. For its creator, "a scientist has an h-index if the h of his/her N_p papers have at least h citations each and the other (N_p-h) papers have $\leq h$ citations each" (Hirsch, 2005). This index is also used to measure the scientific performance of different actors (Alonso et al. 2009) such as journals (Braun et al. 2006), countries (Guan and Gao 2008), institutes or universities (Schubert 2007).

The second approach provides a mapping of the science being investigated by representing the connections or structure of the network in a specific scientific field (Gaviria-Marín 2021).

Given their complementarity, scholars of bibliometric techniques recommend jointly using these procedures (Cobo et al. 2011), and is applied by some authors in their research into entrepreneurship or innovation (Vallaster et al. 2019; Zaragoza-Ibarra et al. 2021).

Following these recommendations, the present study uses bibliometric performance indicators to measure academic output, such as the total number of papers published during a given period of time and their citation structure, the average number of citations per article, the most cited authors, the author's h-index, the IF of journals and data on the geographical distribution of publications and journals, using BibExcel and Excel. Thanks to the free software VOSviewer (version 1.6.15 (0)) (Van Eck and Waltman 2010), analyses are performed using four similarity approaches, namely co-citation, bibliographic coupling, co-authorship and keyword co-occurrence (Boyack and Klavans 2010; Zupic and Čater 2015; Merigó et al. 2018), with units of analysis, such as documents, journals, authors, keywords, among others, to observe their connections.

2.1. Search description

Firstly, to perform the bibliometric analysis, the first step was to obtain relevant studies by consulting the Web of Science (WoS) main database collection. WoS is a digital bibliographic platform that is considered one of the main academic databases for evaluating scientific production worldwide (Merigó et al. 2015; Baier-Fuentes et al. 2019). WoS covers more than 15,000 journals and 50,000,000 articles (Merigó et al. 2015). Although alternative databases exist, the material included in WoS is expected to have the highest quality standards (Merigó et al. 2015). Secondly, appropriate search terms were defined using search equations Topic: ("leader*" and "entrepre*"), combined with factors or skills by including all the relative terms: AND Topic: ("abilit*" or "capabilit*" or "attribut*" or "skill*" or "factor*" or "competenc*" or "behavior*" or "trait*" or "feature*"). The choice of these keywords was based on the literature review conducted by Harrison and Burnard (2016).

The third step was to define a broad time span from 2000 to 2020, to analyse the most recent articles, but over a sufficiently long period to understand the evolution of the literature in the field.

The fourth step was to narrow down the search to the WOS core collection using these indices: SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH, ESCI, CCR-EXPANDED and IC.

The results were then refined by choosing only articles and reviews and, in order to not exclude countries of authorship, articles published in all languages were left out.

2.2. Results from de database

In all, 1,594 documents were obtained. They comprised 1,540 articles and 54 reviews, and 93% of the documents were in English.

3. RESULTS

3.1. Publications and distribution by year

The number of publications per year has increased in the last 20 years (see Figure 1). From 2000 to 2009, the subject of this research was of little interest based on the few collected articles. Publication activity increased from 2010 to 2014, with an average of almost 50 articles per year. This number tripled from 2015 to 2017, with an average of 150 publications per year. Growth has been considerable in the last 3 years with almost 250 articles written on average per year, and with 290 publications in 2020 alone. Thus the EL factors topic has attracted more interest in the scientific community from 2015 to 2020, and accounted for almost 75% of the articles published during that period. As [Harrison and Burnard \(2016\)](#) point out, there is little information on knowledge about these attributes and how they can help entrepreneurs to overcome challenges, and this growing interest is expected to continue and become a reality in forthcoming years.

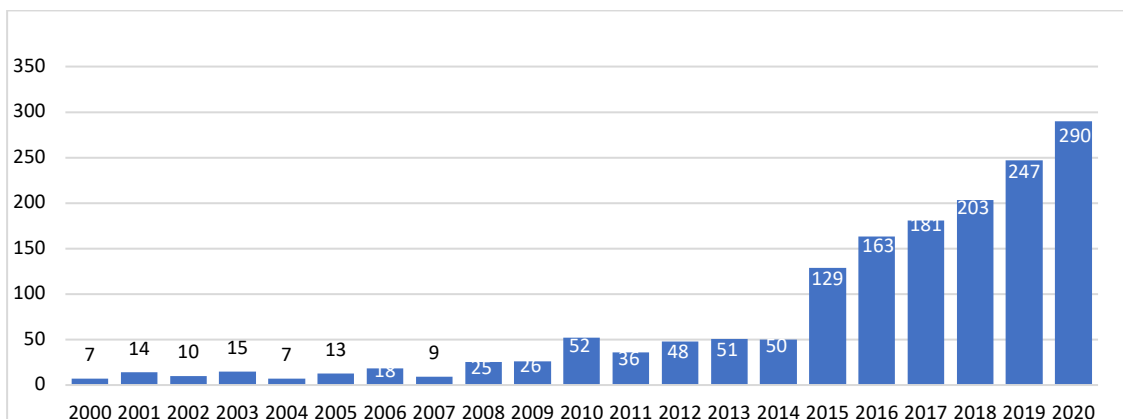


Figure 1

Distribution of documents published per year for research into entrepreneurial leadership factors (2000–2020)

Source: Authors' own elaboration based on data from the WoS.

3.2. Research terms evolution

Figure 2 shows the trend in the frequency of using the terms “entrepreneurial leadership” and “factors” as indicated by the abstracts of the 1,594 papers. A more significant and sustained

increase took place from 2015 onwards. This is quite logical because it was from 2015 onwards when the literature in this field doubled.

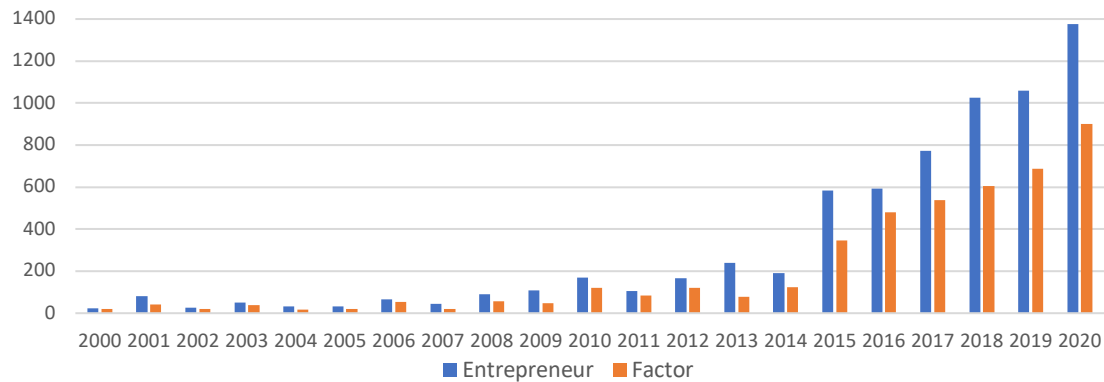


Figure 2

Annual evolution of the keywords “Entrepreneurial Leadership” and “Factor” (with derivatives and equivalents) in the abstracts (2000-2020)

Source: Authors' own elaboration based on data from the WoS.

3.3. Citation Structure

The overall citation structure allows us to analyse the number of documents in relation to a citation threshold (Cancino et al. 2017). Almost one third of the documents from the database received no citations. 73% of the publications received fewer than 10 citations, 27% received 10 citations or more, and only 10 documents received 300 citations or more (see Table 1).

Table 1

General citation structure

Citations	Total papers	%
≥ 300 citations	10	0,6%
≥ 200 citations	22	1,4%
≥100 citations	48	3,0%
≥ 50 citations	106	6,6%
≥ 20 citations	261	16,4%
≥10 citations	435	27,3%
< 10 citations	1159	72,7%
= 0 citations	455	28,5%
Total Papers	1594	100%

Source: Authors' own elaboration based on data from the WoS.

Table 2

Annual citation structure

Year	TP	TC	≥ 300	≥ 200	≥ 100	≥ 50	≥ 20	≥ 10	≥ 1
2000	7	628	0	2	2	3	4	6	7
2001	14	1570	1	3	5	6	10	11	12
2002	10	471	0	0	1	4	7	8	10
2003	15	2452	3	3	4	5	6	10	15

2004	7	1423	1	3	4	5	5	5	7
2005	13	204	0	0	0	0	3	8	12
2006	18	1410	1	1	4	10	11	11	18
2007	9	553	0	0	2	5	7	8	8
2008	25	1703	1	2	6	8	15	19	24
2009	26	538	0	0	1	3	8	10	23
2010	52	2162	0	4	6	13	28	33	51
2011	36	824	0	0	2	4	11	16	29
2012	48	1419	0	0	2	8	18	32	45
2013	51	1939	1	2	5	11	20	33	46
2014	50	1754	2	2	3	8	18	26	50
2015	129	1700	0	0	1	7	29	51	105
2016	163	1645	0	0	0	4	23	54	132
2017	181	1250	0	0	0	0	17	42	147
2018	203	1161	0	0	0	2	17	36	152
2019	247	698	0	0	0	0	4	16	157
2020	290	163	0	0	0	0	0	0	89
Total	1594	25667	10	22	48	106	261	435	1139
%	100%		0,6%	1,4%	3,0%	6,6%	16,4%	27,3%	71,5%

Note: Abbreviations: TP: Total Papers; TC: Total number of citations; Number of papers with \geq of 200, 100, 50, 20, 10 and 1 citation/s.

Source: Authors' own elaboration based on the WoS with Excel.

Table 2 shows that 2003 was the year with the most citations, with 2,452, followed by 2010 with 2,162. The most cited articles are normally located in the most remote years because an article needs a period from 3 to 7 years to obtain the most citations (Wang 2013). However, this baseline reveals that a portion of the most cited papers were located in the most recent years from 2013 to 2018. This indicates that researchers in the field publish papers that are attracting scholarly interest.

Table 3

The five most cited documents in the WoS database

No.	TC	Title	Authors	Year	TC/Y
1	1040	A theory of entrepreneurial opportunity identification and development	Ardichvili, A; Cardozo, R; Ray, S	2003	58
2	758	The relationship of entrepreneurial traits, skill, and motivation to subsequent venture growth	Baum, JR; Locke, EA	2004	45
3	756	A model of strategic entrepreneurship: The construct and its dimensions	Ireland, RD; Hitt, MA; Sirmon, DG	2003	42
4	654	Culture and entrepreneurial potential: A nine country study of locus of control and innovativeness	Mueller, SL; Thomas, AS	2001	32,7
5	539	The big five personality dimensions and entrepreneurial status: A meta-analytical review	Zhao, H; Seibert, SE	2006	35,9

Note: Abbreviations: TC: See Table 2. TC/Y is the total no. of citations in the number of years.

Source: Obtained from VOS viewer software.

Table 3 shows the five most cited papers in the database. Authors like Ardichvili et al.; Baum et al., Ireland et al. Published these articles between 2003 and 2004. The first three articles exceeded 42 citations per year, and the first paper obtained 58.

3.4. The h-index and the most productive and cited authors

In this section, the h-index was employed to measure the scientific performance of the authors or that of the employed database.

The h-index of the used database obtained a value of 73, which means that 73 articles were cited at least 73 times.

Table 4

The 10 most published authors in relation to entrepreneurial leadership factors

Author	TP	University	Country	TC	H	TC/TP	≥ 100	≥ 50	≥10	≥1
Pathak S	9	Xavier University, Ohio	USA	443	13	49.2	0	5	7	7
Hmieleski KM	7	Texas Christian University	USA	760	21	108.6	1	3	3	3
Urbano D	7	Autonomous University of Barcelona	SPAIN	127	31	18.1	1	2	6	7
Bagheri A	7	University of Tehran	IRAN	40	9	5.7	0	2	3	7
Harrison C	7	University of West Scotland	SCOTLAND	38	4	5.4	0	2	5	7
Obschonka M	5	Queensland University of Technology	AUSTRALIA	176	23	35.2	0	3	4	4
Chen MH	5	National Chung Hsing University	TAIWAN	44	13	8.8	0	2	5	5
Haslam SA	5	University of Queensland	AUSTRALIA	105	6	21	1	2	5	5
Wang ZM	5	Zhejiang University	CHINA	25	2	5	0	1	4	5
Muralidharan	5	MacEwan University	CANADA	94	3	18.8	0	3	5	5

Note: Abbreviations: TP: Total Papers; TC: Total number of citations; H: Author h-index data base; H*: Author h index (WoS).

Source: Authors' own elaboration based on the WoS with Excel.

In relation to the more than 3,866 authors, Table 4 presents the 10 authors, and their respective institutions and country of origin, who published most of the articles related to the research topic. The most relevant authors were Pathak, Hmieleski, Urbano, Bagheri and Harrison, who stood out with nine articles for Pathak and seven publications for the rest. Of the 10 most published authors, Hmieleski received 760 citations and Pathak 443. Finally, three authors' h-index was higher than 20.

Table 5

The first authors of the most co-cited papers in research

No.	Author (first only)	TC	TLS
1	Lumpkin gt, 1996, acad manage rev, v21, p135	132	128
2	Podsakoff pm, 2003, j appl psychol, v88, p879	125	124
3	Shane s, 2000, acad manage rev, v25, p217	113	108
4	Fornell c, 1981, j marketing res, v18, p39	106	106
5	Barney j, 1991, j manage, v17, p99	89	84
6	Gupta v, 2004, j bus venturing, v19, p241	82	80
7	Miller d, 1983, manage sci, v29, p770	77	76
8	Covin jg, 1989, strategic manage j, v10, p75	73	71
9	Teece dj, 1997, strategic manage j, v18, p509	71	71
10	Hambrick dc, 1984, acad manage rev, v9, p193	66	65

Note: Abbreviations: TC: Total number of citations; TLS: Total Link Strength.

Source: Obtained from VOS viewer software.

The most representative authors who were cited in the publications were Lumpkin (1996), Podsakoff (2003), Shane (2000), among others (see Table 5). It is noteworthy that seven of the 10 articles date before 2000, the year from which time this analysis was carried out.

3.5. Geographical distribution of the most productive and cited countries

Table 6 shows publishers' top 15 countries of origin from the most to the fewest papers, and the citations that they received.

Table 6

The 15 most published countries in relation to entrepreneurial leadership factors

Country	TP	TC	H	TC/TP	≥ 300	≥ 200	≥ 100	≥ 50	≥ 20	≥ 10	≥ 1
USA	461	15327	57	33.2	9	18	33	66	133	186	274
ENGLAND	163	2648	30	16.2	0	0	6	11	41	66	99
CHINA	116	669	14	5.8	0	0	0	2	7	24	70
SPAIN	99	1698	17	17.2	1	1	3	7	16	29	52
AUSTRALIA	99	2064	23	20.8	1	1	2	10	25	43	60
GERMANY	88	1568	21	17.8	0	0	3	10	22	31	54
CANADA	84	2382	18	28.4	2	2	3	7	16	25	38
INDIA	49	126	6	2.6	0	0	0	0	1	3	26
MALAYSIA	48	449	9	9.4	0	1	1	2	4	9	25
ITALY	44	488	12	11.1	0	0	1	1	8	12	22
NETHERLANDS	43	857	11	19.9	1	1	1	2	8	12	20
FRANCE	41	845	11	20.6	0	2	2	3	10	13	29
SWEDEN	40	1603	13	40.1	1	2	5	5	10	17	22
RUSSIA	37	70	5	1.9	0	0	0	0	0	1	21
TAIWAN	31	328	8	10.6	0	0	1	1	4	7	11

Note: Abbreviations in Table 2. H: h-index research database.

Source: Authors' own elaboration based on the WoS with Excel.

The USA was the most influential and productive country with 461 papers, followed by England with 163, China with 116, and Spain and Australia with 99 each. The citation structure differed from that of article production insofar as, although the USA and England were the countries with the most citations, Canada was the third, followed by Australia, Spain and Switzerland, and all above China.

From 2000 to 2008, the USA published an average of six articles per year. From 2009 to 2014, the average number of disclosed articles exceeded 18 units. It was in 2015 when the USA published an average of more than 47 articles by 2020. This three-stage growth pattern was replicated for countries like England, China, Spain, among others (see Table 7).

Table 7

Evolution of documents per country for the 2000-2020 period

Country	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	Total
USA	4	8	8	6	5	7	8	3	14	9	23	17	18	27	18	32	42	41	52	60	59	461
ENGLAND	1	2	1	1	1	0	1	2	0	3	3	2	9	6	8	17	12	19	18	24	33	163
CHINA	0	0	0	1	0	0	0	0	0	0	0	1	4	0	3	6	8	10	14	26	43	116
SPAIN	1	0	0	0	0	1	2	1	1	0	2	2	4	4	6	4	9	15	13	17	17	99
AUSTRALIA	0	0	0	1	0	1	3	1	4	1	3	4	4	5	4	7	8	13	14	12	14	99
GERMANY	0	1	0	2	0	0	1	0	0	1	6	1	4	2	2	5	12	7	11	12	21	88
CANADA	0	0	0	1	0	1	1	1	3	1	2	4	1	2	5	7	8	9	10	14	14	84
INDIA	0	0	0	0	0	1	0	0	1	1	0	0	0	0	1	4	8	6	7	8	12	49
MALAYSIA	0	0	0	0	0	0	0	0	0	1	1	0	2	1	0	5	3	7	6	11	11	48
ITALY	0	0	0	0	0	0	0	0	2	0	3	1	2	1	1	6	3	3	5	4	13	44

NETHERLANDS	0	0	0	0	0	0	0	0	2	0	2	3	2	2	0	3	2	6	7	5	9	43
FRANCE	0	0	0	0	0	0	0	0	1	0	3	0	0	0	0	3	7	6	3	9	9	41
SWEDEN	0	1	0	1	0	0	0	1	1	0	1	0	1	7	1	4	2	4	7	5	4	40
RUSSIA	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	6	4	7	3	8	7	37
TAIWAN	0	0	1	0	0	2	0	0	0	0	1	1	1	0	3	4	1	3	5	6	3	31

Note: Abbreviations: 00, 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20= year of publication.

Source: Authors' own elaboration based on the WoS with Excel.

3.6. Most productive and cited journals

The top three journals that have published articles related to the present research topic were: Sustainability, International Entrepreneurship and Management Journal and Journal of Business Venturing (see Table 8). However, the most cited journals were Journal of Business Venturing with 3,580 citations and 20 articles, followed by Journal of Management with 1,991 citations and nine articles.

Table 8

Citation structure of the sources that published the most

Journal	TP	TC	H	TC/TP	IF 2020	IF 5 years	% s/TA	≥ 300	≥ 200	≥ 100	≥ 50	≥ 20	≥ 10
Sustainability	28	116	5	4	3.251	3.473	1.8%	0	0	0	0	1	3
International Entrepreneurship and Management Journal	21	277	8	13	5.94	6.458	1.3%	0	0	0	2	5	6
Journal of Business Venturing	20	3580	16	179	12.065	15.732	1.3%	2	7	9	13	16	18
Journal of Small Business Management	19	524	10	28	3.461	5.151	1.2%	0	0	1	4	7	10
Journal of Business Research	16	357	11	22	4.544	6.799	1%	0	0	0	2	6	11
Frontiers In Psychology	16	42	5	3	2.988	3.618	1%	0	0	0	0	0	0
Management Decision	16	141	7	9	4.957	4.816	1%	0	0	0	0	3	6
Entrepreneurship and Regional Development	14	399	7	29	5.149	6.142	0.9%	0	0	2	2	6	7
International Journal of Entrepreneurial Behavior & Research	14	142	7	10	4.412	4.996	0.9%	0	0	0	0	1	6
Journal of Management Studies	13	194	4	15	7.388	10.96	0.8%	0	0	1	2	3	3
Journal of Product Innovation Management	12	671	10	56	6.987	9.603	0.8%	0	0	2	5	9	10
Small Business Economics	11	181	6	16	8.164	8.139	0.7%	0	0	0	2	3	5
Education and Training	11	63	3	6	2.275	2.948	0.7%	0	0	0	0	2	2
Journal of Business Ethics	11	418	8	38	6.43	7.83	0.7%	0	1	2	2	3	6
Journal of Social Entrepreneurship	10	34	3	3	ND	ND	0.6%	0	0	0	0	0	1
Journal of Management	9	1991	9	221	11.79	16.662	0.6%	3	3	5	7	8	8
Entrepreneurship Theory and Practice	9	492	7	55	10.075	15.191	0.6%	0	0	1	4	7	7

Note: Abbreviations in Table 2; H: h-index research base; IF: Impact Factor; NA: not available.

Source: Authors' own elaboration based on the WoS with Excel.

Information on journals' IF is included. The top journals, Sustainability and International Entrepreneurship and Management Journal, had a low IF compared to the more influential journals Journal of Business Venturing and Journal of Management. The last two journals were the only ones with publications with at least 300 citations or more.

Table 9

Evolution of publications per journal during the 2000-2020 period

Journal	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	Total
Sustainability	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	7	11	4	28
International Entrepreneurship and Management Journal	0	0	0	0	0	0	0	0	0	0	0	0	1	1	3	1	1	2	2	4	6	21
Journal of Business Venturing	2	2	0	1	2	0	2	0	1	0	0	1	2	0	0	0	2	1	2	1	1	20
Journal of Small Business Management	0	0	0	0	0	0	1	1	1	0	2	0	0	0	0	3	1	1	0	7	2	19
Journal of Business Research	0	0	0	0	0	0	0	2	1	0	1	0	0	1	0	1	2	0	1	2	5	16
Frontiers In Psychology	0	0	1	0	0	0	0	0	0	0	0	0	2	1	1	4	1	0	2	2	2	16
Management Decision	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	1	3	9	16
Entrepreneurship and Regional Development	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	4	4	1	3	14
International Journal of Entrepreneurial Behavior & Research	0	0	0	0	0	0	0	0	0	0	2	1	1	1	0	0	2	1	2	2	2	14
Journal of Management Studies	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	9	13
Journal of Product Innovation Management	0	0	0	0	0	0	1	0	1	1	0	0	2	1	4	0	0	1	0	0	1	12
Small Business Economics	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	1	2	1	4	11
Education and Training	0	1	0	0	0	0	0	0	0	0	3	0	1	0	0	0	2	0	2	1	1	11
Journal of Business Ethics	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	1	4	3	11
Journal of Social Entrepreneurship	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	6	1	10
Journal of Management	0	0	0	2	0	0	0	0	0	0	0	0	1	1	1	2	1	0	0	1	0	9
Entrepreneurship Theory and Practice	0	0	0	0	0	0	0	0	1	0	0	1	2	1	0	1	0	0	0	1	2	9
Academy of Management Perspectives	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	5	8

Note: Abbreviation in Table 7.

Source: Authors' own elaboration based on the WoS with Excel.

Based on the evolution of publications over time (see Table 9), the Journal of Business Venturing has published articles regularly since 2000, with an average of one article per year.

Other journals, such as the International Entrepreneurship and Management Journal, did not start publishing until 2012, or until 2015 for the journal Sustainability. From this time onwards, publications were more assiduous and increased until they became the journals with the most published documents.

3.7. Research per category

In terms of WoS categories, slightly more than 33% and slightly less than 33% of the articles fell in the Management and the Business category, respectively (see Figure 3 and Table 10).

Although the entrepreneurship and leadership fields began as separate areas, three decades ago several scholars drew parallels between these two domains both historically and conceptually (Lippitt 1987; Vecchio 2003; Gupta et al. 2004; Renko et al. 2015; Harrison and Burnard 2016). This concordance has more recently led to the discovery of an intersection between Entrepreneurship and leadership that has benefited from mutual cross-fertilisation (Cogliser and Brigham 2004; Renko et al. 2015; Leitch and Harrison 2018; Karpinskaia and Shirokova 2019), and may justify such ambiguity in classifying it into different categories.

Seven articles exceeded 300 citations for the Management category and six for the Business category. The Applied Psychology category stood out with six publications and more than 300 citations.

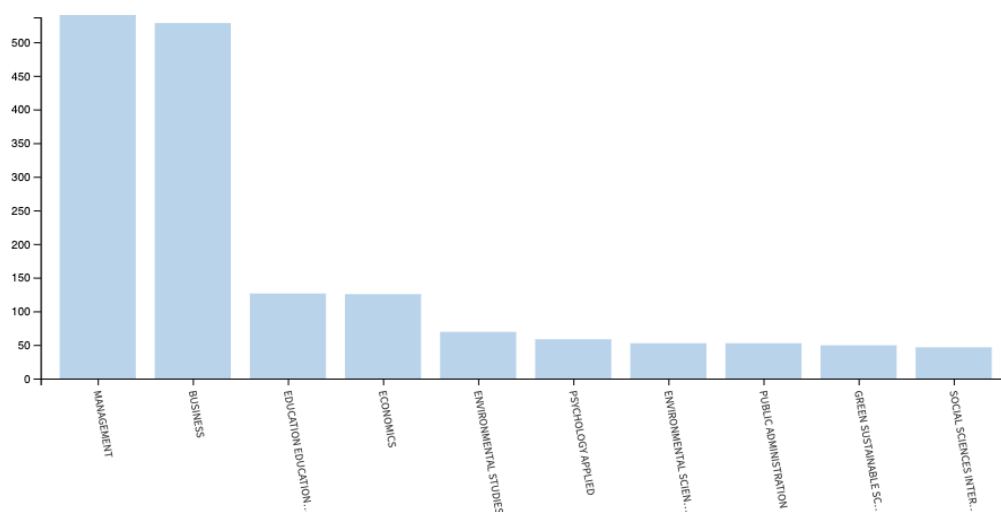


Figure 3

Distribution of categories (2000-2020)

Source: Obtained from the WoS.

Table 10

Main categories in the WoS and citation structure

WOS category	TP	%	TC	H	TC/TP	≥ 300	≥ 200	≥ 100	≥ 50	≥ 20	≥ 10	≥ 1
Management	534	33,5%	12826	52	24	7	11	26	58	125	200	422
Business	524	32,9%	13918	56	27	6	15	31	61	132	196	406
Education & Educational Research	123	7,7%	871	14	7	0	0	1	4	10	19	72
Economics	122	7,7%	820	17	7	0	0	0	3	12	26	77
Environmental Studies	66	4,1%	984	16	15	0	1	2	4	12	23	54
Psychology, Applied	55	3,5%	4528	22	82	6	6	11	17	23	26	46
Public Administration	49	3,1%	902	15	18	0	0	1	6	13	19	43
Environmental Sciences	49	3,1%	981	14	20	1	1	1	3	11	14	39
Green & Sustainable Science & Technology	46	2,9%	286	8	6	0	0	0	1	5	7	33
Social Sciences, Interdisciplinary	43	2,7%	162	7	4	0	0	0	0	2	5	28

Note: Abbreviations in Table 2.

Source: Authors' own elaboration based on the WoS with Excel.

Table 11

Main research areas and citation structure

Research Area	TP	%	TC	H	TC/TP	≥ 300	≥ 200	≥ 100	≥ 50	≥ 20	≥ 10	≥ 1
Business & Economics	920	57.7%	19997	67	22	9	2	41	85	188	303	691
Education & Educational Research	144	9%	1070	16	7	0	0	1	4	14	25	91
Psychology	113	7.1%	5006	28	44	6	6	11	19	30	40	90
Social Sciences – Other Topics	100	6.3%	909	16	9	0	1	2	2	11	23	67
Environmental Sciences & Ecology	84	5.3%	1701	18	20	1	2	3	7	18	30	68
Engineering	72	4.5%	1723	24	24	0	0	4	11	27	33	59
Public Administration	71	4.5%	1146	19	16	0	0	1	6	19	29	58

Science & Technology – Other Topics	66	4.1%	319	8	5	0	0	0	1	5	8	46
Government & Law	41	2.6%	800	14	20	0	0	1	7	11	16	32
Development Studies	36	2.3%	668	14	19	0	0	2	3	9	16	29

Note: Abbreviations in Table 2.

Source: Authors' own elaboration based on the WoS with Excel.

In Table 11, categories are analysed per research area. Business & Economics is the main category with 920 publications and almost 20,000 citations in all. It is followed by Education & Educational Research, Psychology and Social Sciences.

3.8. Analysis of graphic maps

This section aims to present an analysis of scientific graphical maps based on bibliographic data using the VOSviewer software.

A. Co-citation of journals and authors

Figure 4 analyses the co-citation of the journals cited in the database. Journal co-citation occurs when two papers published in different journals receive a citation from a third paper in another journal (Merigó et al. 2018). This reveals the possibility of a paper B and a paper C cited by a paper A addressing the same topic (Blanco-Mesa et al. 2017). The more citations the two papers receive in the same article, the closer their relation (Small 1973). The more published documents, the larger the node size. The shorter the distance between nodes, the higher the citation frequency, and vice versa (Liao et al. 2018). Figure 4 presents the overall visualisation with a minimum threshold of 150 citations to obtain 73 sources with 300 connections. Three clusters of journals are clearly observed when papers have high co-citations, which reveals strong connections: Academy of Management Journal, Academy of Management Review and Strategic Management Journal (red); Journal of Business Venturing (green) and Journal of Applied Psychology (blue). To a lesser extent, there are the clusters with Entrepreneurship Theory and Practice (purple) and Journal of Product Innovation Management (yellow).

Figure 5 is a bibliometric map on which co-citation connections are established between authors to form 11 thematic clusters. The author co-citation analysis (White and Griffith 1981) aims to show the structure and connections of the authors who are most frequently cited together (Gaviria-Marin et al. 2019).

In the main node, we find Hmieleski as an influential author in EL research. This is evident because he is the author with the most received citations and with seven articles written on the impacts of leadership on entrepreneurship performance. In node 2, we note Obschonka with five articles and 176 citations. Node 3

shows Bagheri (7 articles 40 citations) and Harrison (7 publications, 38 citations). These authors have focused their study on the intentions, skills, competencies and abilities that form part of EL. The last two authors have even proposed a multidimensional measurement construct of EL. In node 4, Pathak stands out (9 publications, 443 citations) for focusing on the impact of the cultural

context in the field. In node 11, Urbano is highlighted with his studies on entrepreneurship internationally, in university contexts, etc.

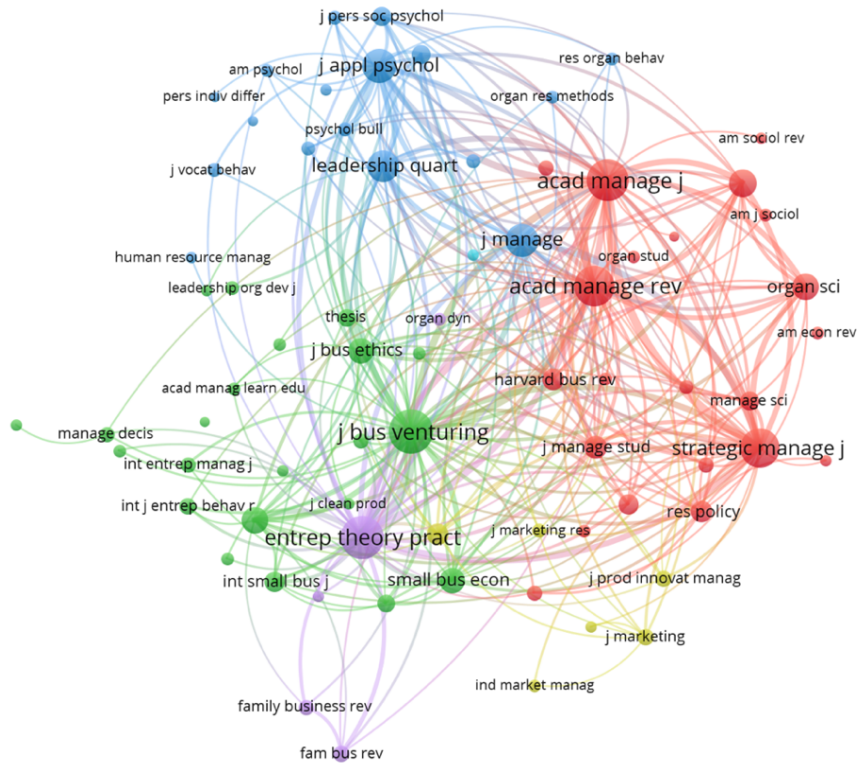


Figure 4

Co-citation of journals

Source: Obtained from VOS viewer software.

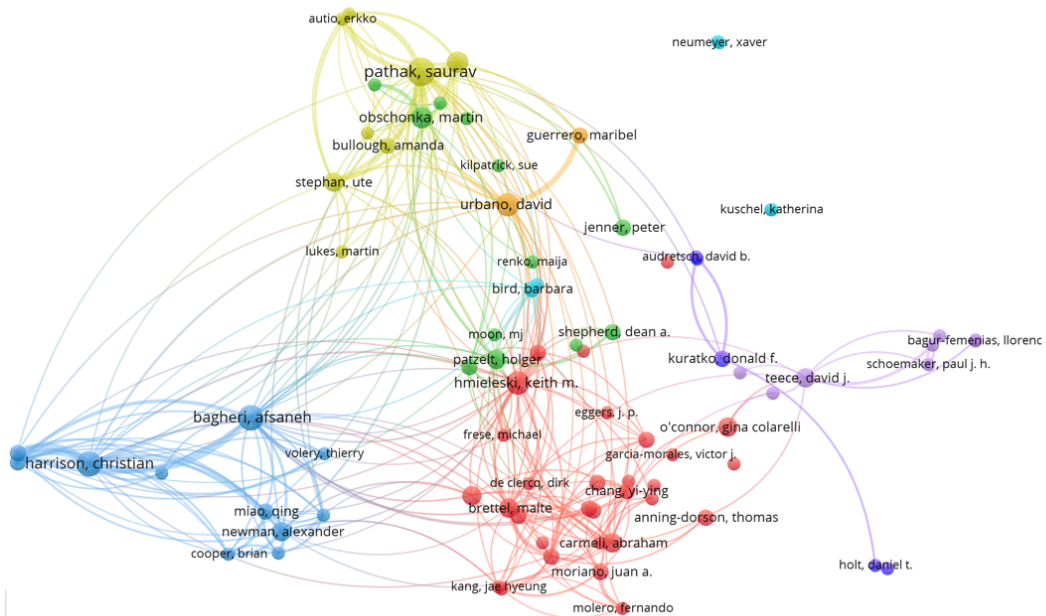


Figure 5

Co-citation of authors

Source: Obtained from VOS viewer software.

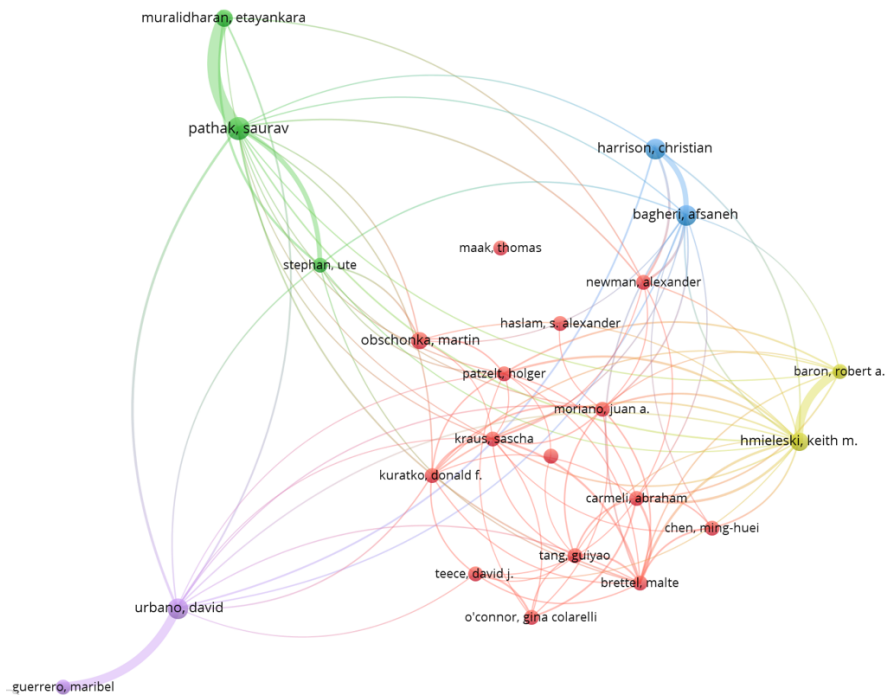


Figure 6

Bibliographic coupling of authors

Source: Obtained from VOS viewer software.

B. Bibliographic coupling by authors and countries

Bibliographic coupling of authors occurs when the authors of two papers cite the same third paper. Hence both are stated to be bibliographically coupled. The larger the number of common bibliographic references, the greater the intensity of their relation (Kessler, 1963).

Figure 6 presents the 24 authors with a minimum threshold of four papers per author, which also shows the 100 strongest bibliographic coupling connections. The advantage of this figure is that it provides a graphical mapping of authors by grouping those with similar research profiles, i.e. those citing similar bibliographic material. The five most important clusters are shown: the red cluster indicates the highest concentration of connections, but with medium intensity between authors like Brettel, Carmeli, Chen, Kuratko, Obschonka, among others. The green cluster is formed by productive authors Pathak, Muralidharan, Stephan, with a strong intensity among them. The blue cluster is made up of Bagheri and Harrison, the yellow cluster contains Hmielsinki and Baron and, finally, the purple cluster is formed by Urbano and Guerrero. This strong intensity, marked by the thick lines connecting them, shows that these authors may have similar, or even joint, research lines. This is the case of: Pathak and Muralidharan with five joint articles; Urbano and Guerrero with four; Bagheri and Harrison or Pathak and Stephen with one.

Figure 7 presents the graphical map of the bibliographic coupling among the main countries. It depicts interesting relationships among them. This map has a threshold of six documents per

country and 100 connections. Although many clusters were obtained, the USA was bibliographically coupled with England, China and Canada and, to a lesser extent, with Spain and Germany.

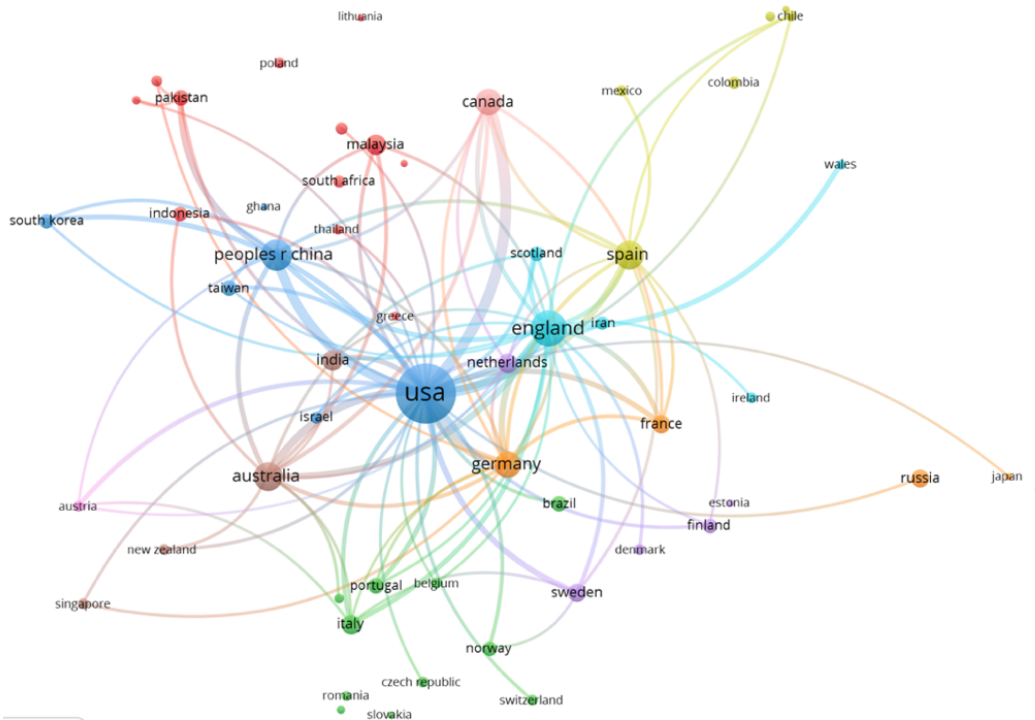


Figure 7

Bibliographic coupling by countries

Source: Obtained from VOS viewer software.

C. Co-authorship per country

Figure 8 shows the co-authorships per country by identifying the degree of communication and scientific collaboration among them and the most productive countries (Merigó et al. 2018). The graphical map is obtained with a threshold of at least six articles per country. The largest nodes are the most influential countries, i.e. the USA, England and, to a lesser extent, China, Spain, Germany, Australia and Canada. The relationship lines represent cooperation between countries. It can be concluded that the USA has considerably cooperated with Canada and China and, to a lesser extent, with Australia, Germany, Spain, among others.

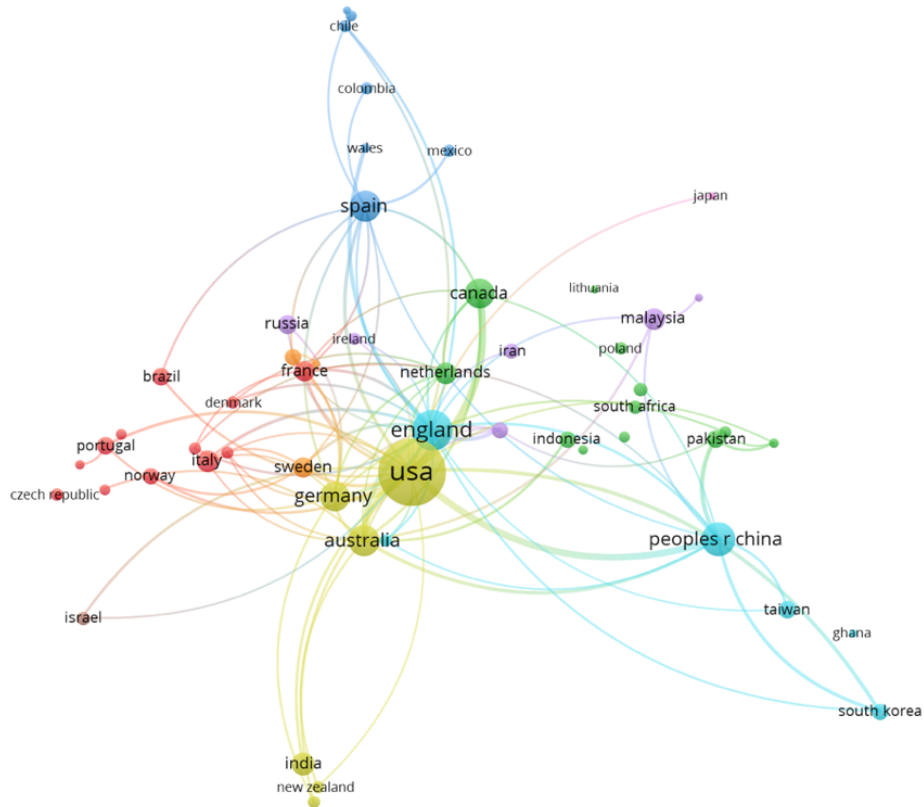


Figure 8

Co-authorship per country

Source: Obtained from VOS viewer software.

D. Co-occurrence per keywords

By collecting keywords, a content analysis can be carried out to provide quantitative measures. This method has potential when discovering emerging fields (Ellegaard and Wallin 2015). Therefore, the main keywords in the document base are analysed with the co-occurrence of keywords of two types: Author keywords, provided by the authors themselves; KeyWords Plus (KW+), taken automatically by SSCI¹, based on the frequency of words occurring in the titles of the references of the cited articles.

Table 12 shows the top 10 keywords with the highest frequency, i.e. the most occurring ones with the total link strength with other keywords by selecting those with the greatest total link strength (TLS). These are: entrepreneurship, leadership, innovation, social entrepreneurship, entrepreneurial leadership, entrepreneurial orientation, sustainability, transformational leadership, among others.

¹ Social Sciences Citation Index

Figure 9 shows a visualisation of the Author keywords overlaid with their average year of publication using colours to represent their temporal variation. The dark blue terms were published around 2016 on average, are those with an average year of publication around 2017.5 are shown in green, and the keywords with an average year of publication around 2018 are depicted in yellow.

Table 12
Co-occurrence of the top 10 author keywords

No.	keyword	occurrences	Total Link Strength
1	Entrepreneurship	198	122
2	Leadership	155	112
3	Innovation	98	76.00
4	Social entrepreneurship	48	28.00
5	Entrepreneurial leadership	43	22.00
6	Entrepreneurial orientation	36	28.00
7	Sustainability	29	22.00
8	Transformational leadership	28	24.00
9	Entrepreneurs	28	19.00
10	Gender	27	22.00

Source: Obtained from VOS viewer software.

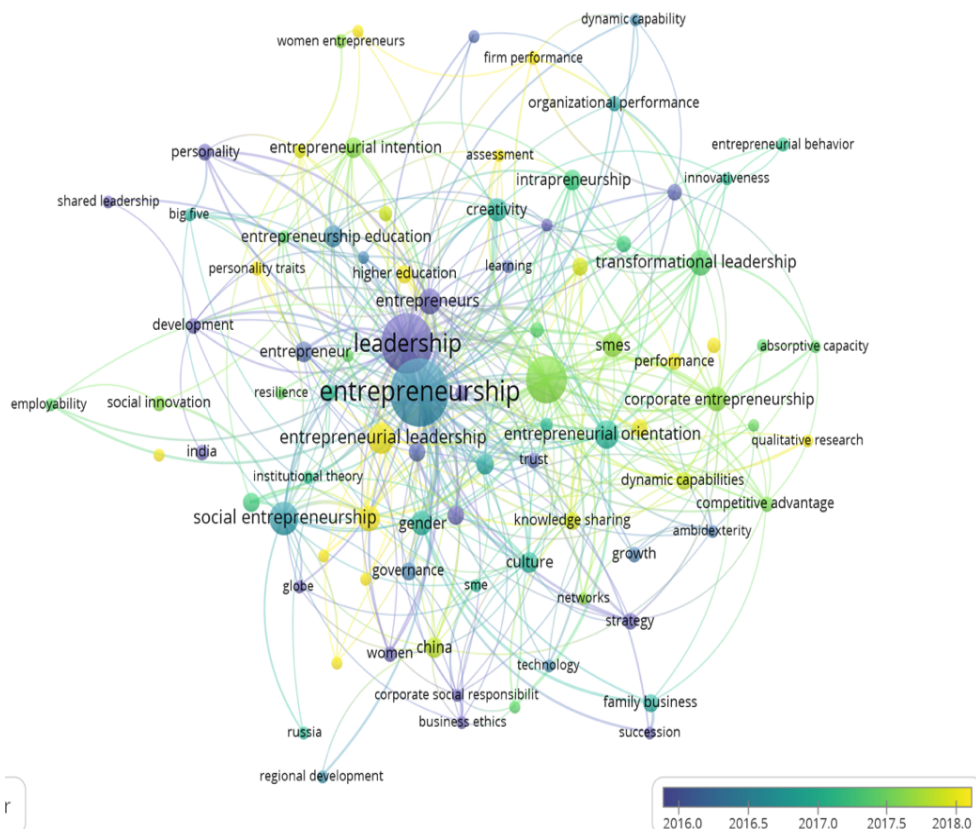


Figure 9

Co-occurrence of author keywords with overlay visualisation

Source: Obtained from VOS viewer software.

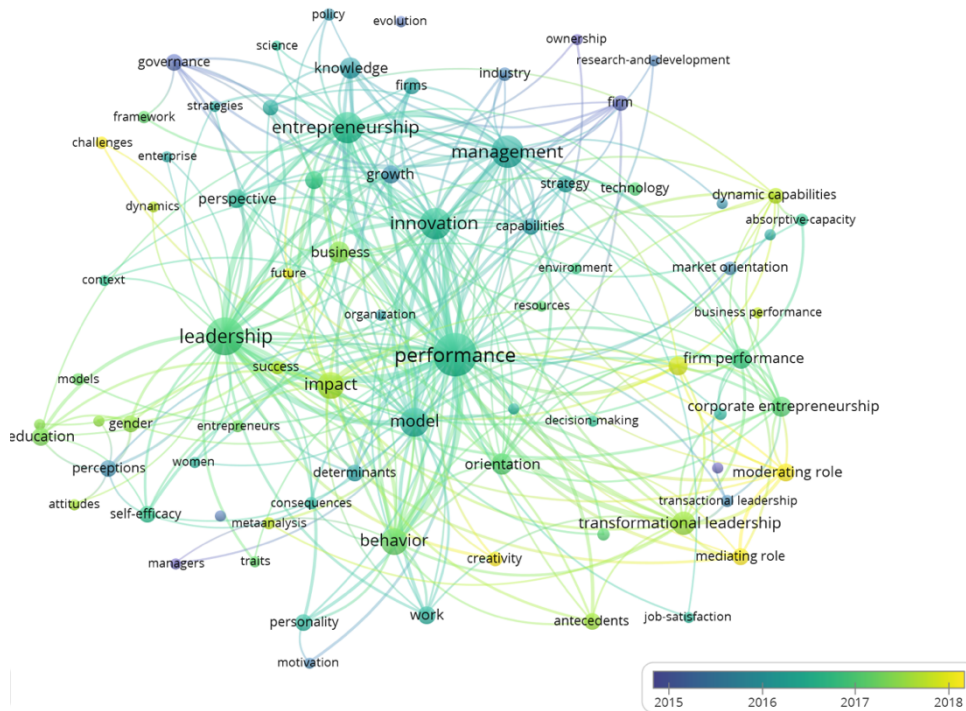


Figure 10

Co-occurrence of Plus keywords with the overlay visualisation

Source: Obtained from VOS viewer software.

The terms leadership, entrepreneur, woman, personality and development had a publication average immediately prior to 2016. Roughly halfway through 2016, the words entrepreneurship, social entrepreneurship, creativity, social capital, growth and entrepreneurship orientation stood out. The items innovation, intrapreneurship, transformational leadership, corporate entrepreneurship, culture, competitive advantage, entrepreneurial intention or self-efficacy were published on average about halfway through 2017. From 2018 onwards, the term “entrepreneurial leadership” appeared. All this is interesting because it means that the research community is beginning to consider this “new paradigm” as a field in its own right. Other items are highlighted, such as sustainability or university education. However, the most remarkable emerged around the end of 2017 and 2018, when EL factors appeared in the literature, such as: personality traits, competences, skills, evaluation, self-efficacy, innovative behaviour, servant leadership, market orientation, social networks, performance, dynamic capabilities, among others.

In Figure 10 below, KW+ were selected because these units of analysis better reflect the dynamics of the field, and they are up-to-date, more specific and higher quality terms compared to Authors’ keywords (Gálvez 2016). For a representative sample of the thematic groups, only the KW+ whose frequency was ≥ 20 times were selected; i.e. those occurring in the scientific output at least 20 times. The most recent ones in lime green and yellow depict performance, transformational leadership, dynamic capabilities, impact and creativity, among others.

4. DISCUSSION AND CONCLUSIONS

4.1. Lessons learnt

This study aims to contribute to the field of research into EL factors by providing an overview of the landscape and a precise focus through a detailed bibliometric analysis. Using the two main bibliometric methods, performance analysis and scientific graph mapping, the main authors were identified, as were the countries and journals researching it, trends in publications and the interrelationships among them. The results were obtained by analysing a bibliographic database obtained from the WoS core collection, which is considered the most influential in the scientific community.

The bibliometric study generally revealed that the number of research studies related to EL factors has increased since 2015, which confirms that this emerging field is attracting researchers' considerable interest. This is because it is vital to identify and better understand which leadership attributes are considered the most valuable in entrepreneurship to successfully manage it (Cogliser and Brigham 2004; Gupta et al. 2004; Fernald et al. 2005). It was also from 2015 onwards when the use of the terms EL and leadership factors in entrepreneurship began to develop and notably grow.

However, almost 73% of the papers indexed in the WoS database have received less than 10 citations. This finding reflects that it is still necessary to disseminate more knowledge and to generate impact for future research. In contrast, the most cited papers appeared in the most recent years, from 2013 to 2018. This reinforces the assertion that researchers in this field publish papers that arouse the scientific community's recent interest.

Five authors have published seven papers or more on this topic: Pathak (USA), Urbano (Spain), Bagheri (Iran), Harrison (Scotland) and Hmieleski (USA). Hmieleski and Pathak are the most cited, and in that order. Bibliographic coupling per authors revealed strong connections between authors, who focus on similar, or even joint, research lines. This was the case of the co-authorships between Pathak and Muralidharan, Urbano and Guerrero, Bagheri and Harrison, among others. According to the study of co-citations per authors, the node with Hmieleski stood out for being an influential author with articles written in the field of impacts of leadership on entrepreneurial performance.

Obschonka, and Bagheri and Harrison stood out for publishing studies that focus on the intentions, skills, competencies and abilities that form part of EL. In another node, Pathak has centred on the impact of cultural context on EL.

The USA is the leader in productivity and influence terms with 29% of published documents and more than 15,327 citations. It was followed by England with 10% of publications and 2,648 citations. China, Australia and Spain followed for number of published articles, and were followed by Canada and Australia for citations. The productivity and influence of many countries has increased because several research groups have been created, which is reflected in the bibliographic coupling per country. The United States was clearly coupled with England, China and Canada and, to a lesser extent, with Spain and Germany. For co-authorship per country, the USA cooperates with Canada and China and, to a lesser extent with Australia, Germany and

Spain. Both the publications of, and influence on, these countries have considerably grown in recent years.

The top three journals in productivity terms were Sustainability, International Entrepreneurship and Management Journal and Journal of Business Venturing. However, the most influential journals for being the most cited and with the highest IF and h-index in research were Journal of Business Venturing, followed by Journal of Management, Journal of Product Innovation Management, Journal of Small business Management and Entrepreneurship Theory and Practice. Once again, the graphical mapping and citation analysis of the journals reinforced these results. These results are understandable because of a general researchers' tendency to consider the publications of these journals as being the most prestigious.

Slightly more than 33% of the articles fell in the Management category and slightly less than 33% in the Business category due to the existing ambiguity that indistinctly associates EL with the entrepreneurship and leadership fields. This ambiguity is reflected in the co-citation per journals in which more than three clear thematic clusters appeared: management journals, business journals and psychological journals.

The trends obtained from the temporal evolution of using Authors' keywords have recently focused on the study of EL factors. Furthermore, the EL term started being used in its own right from about 2018 on average.

4.2. Main Limitations

We remind readers that the information herein presented is primarily descriptive and provides a general orientation of the field in relation to the several analysed dimensions.

Another limitation is that these results came from the WoS core collection database. Although this database is considered one of the most influential, it may have some limitations. Firstly, it uses the complete count of all the participating units of a paper.

Therefore, papers with several co-authors perform better than single-authored papers because they are not broken down according to number of authors. Secondly, this analysis measures publications by considering the institutions and countries of the authors publishing in the journal and their affiliation at the time of publication, and does not take into account whether the author has retrospectively changed institution. Finally, the results represent the overall picture available until 2020. This means that these results may evolve differently from that expected in the future because they are dynamic data.

4.3. Future research lines

Future research lines include the need to explore this field from a gender lens to confer it a more pluralistic approach. Although the literature on female entrepreneurship has developed in recent decades, and the research emphasis has shifted from predominantly descriptive explorations to studies that integrate empirical research (Henry et al. 2015), gender issues have rarely been acknowledged in this emerging field (Harrison et al. 2015).

Another possible research direction is to analyse other databases, such as Scopus or Google Scholar, to obtain a more plural broader base because, although it is clear that some countries have only a few publications on the subject, it does not mean that they are not producing countries.

Finally, given the many identified research areas (e.g. economics and business, management, education, psychology, etc.), it could be interesting to investigate how these areas intertwine and originate. For researchers, understanding what is being researched and where research is going in the knowledge field are extremely valuable

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CHAPTER III. FEMALE ENTREPRENEURIAL LEADERSHIP FACTORS

Article 2

Female entrepreneurial leadership factors.

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Female entrepreneurial leadership factors

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ABSTRACT.

This article presents the foundations, current structure and trend of academic research into leadership factors in female entrepreneurship to provide scholars in the field with an overview of the followed research directions and to explore whether the same traditional patterns are reproduced in gender studies on entrepreneurship and leadership. For this purpose, a bibliometric analysis of the Web of Science database from 2000-2020 was used. With a performance analysis of variables (e.g. authors, publications, journals and countries), and thanks to scientific mapping, the links among these variables were studied. The results show that the trend of publications increased from 2015, but with little influence and output. The most influential and productive countries are the USA and Spain. Thirty-five percent of the journals are based in the USA and 25% in England. The most influential ones deal with entrepreneurship, business, management and leadership. Although the foundational base is influenced by the author Ahl, known for calling for new research directions related to women entrepreneurs from a social construction perspective, the most influential articles continue to investigate gender with a dominant male bias. The network analysis reveals cooperation between different countries and authors with the USA dominating. The ambiguity of entrepreneurial leadership field due to the overlap of entrepreneurship and leadership disciplines reveals through the co-citation of journals different specialisation of areas: business and entrepreneurship, management and psychology, organisational behaviour. This work provides researchers with an overview that encourages them to overcome the dominant male normative lens from new epistemological perspectives.

Keywords: Female Entrepreneurial Leadership, Bibliometric Analysis, Gender, Entrepreneurial leadership factors

1. INTRODUCTION

Research into female entrepreneurship (FE) has developed significantly in recent decades. Several arguments are used to justify the territory chosen to legitimise research in this field (Ahl, 2003). The vast majority of scholars do so from a traditional market perspective by citing its high impact on economic growth (Ahl, 2004; Calás, Smircich, & Bourne, 2009), but others do so to search for equality (Ahl, 2003), through its impact as a social process of change (Calás et al., 2009). What is certain is that FE deserves to be studied in its own right (Bruin, Brush, & Welter, 2006). However, some feminist researchers warn about the importance of the chosen epistemological positioning by challenging and questioning the very basis of followed practices by obtaining very different results depending on the research approach and lenses employed (Ahl, 2006; Calás et al., 2009).

Traditional research has often considered the entrepreneur to be “generic”, and only differentiated from non-entrepreneurs. Hence it is not considered necessary to research women specifically because they have similar characteristics (Bruin et al., 2006). Other assumptions have focused on gender as a variable (Carter & Shaw, 2006), with a large number of studies that primarily compare male and female entrepreneurs. Although these last studies have advanced the FE field by “improving understanding and highlighting the contribution of women-led businesses to the global economy” (Henry, Foss, Fayolle, Walker, & Duffy, 2015), they have generated a persistent, but hidden, gender bias in entrepreneurial discourse with a dominant male model, where stereotypes with masculine characteristics have prevailed (Ahl, 2004; Antunes, Abreu, & Rodrigues, 2020). Consequently, women are positioned as lacking and incomplete men, and their businesses are considered to be less important (Ahl, 2006). Overall, contemporary scholars now recognise the unconscious tendency of some accepted research approaches to contribute to the highly biased perception of women entrepreneurs as inferior to their male peers (Ahl, 2006) by, thus, reinforcing and replicating the subordination of the feminine to the masculine (Marlow & Patton, 2005). Despite calls to employ feminist theory as an analytical framework to demonstrate this inferiority bias, “there is little evidence that this has emerged”. So research remains descriptive rather than explanator (Ahl & Marlow, 2012).

Research into women’s leadership has followed the same patterns. The leadership literature studies different leadership styles and approaches in an attempt to identify distinct skills that contribute to leadership effectiveness, but still reflects the same “gendered paradigm” (Galloway, Kapasi, & Sang, 2015). The “symbolic universe of masculinity” (Patterson, Mavin, & Turner, 2012) has so substantially shaped leadership development that leadership can hardly be separated from men (Eagly & Carli, 2003). Understandings of organisations, leaders and individual roles are based on gendered expectations (Patterson et al., 2012) in which we find masculinity and men as normative referents (Calás & Smircich 1996), women develop as leaders in a masculine context (Elliott & Stead, 2008) and it is a challenge to assert their authenticity (Galloway et al., 2015). Once again, these assumptions situated in Western industrial contexts that reproduce these ‘masculine ideals’ condition the research focus that impacts leadership practice (Elliott & Stead, 2008).

Some researchers have sought to move the focus of women’s research forward by taking it out of “its dead end” and proposing new directions (Ahl & Marlow, 2012). They recommend feminist theorising that “challenges the highly gendered nature of entrepreneurship studies” (Ahl, 2006; R. Harrison, Leitch, & Mcadam, 2015; Henry, Foss, Fayolle, et al., 2015), and also leadership by promoting a shift from a male experience-based approach to a more interpretive poststructuralist methodology with women’s experiences (Calás et al., 2009). It is important to make progress in gender studies to understand how gender is constructed by moving from having “a descriptive approach with no theoretical orientation to an approach with highly informed conceptual frameworks” (Henry, Foss, & Ahl, 2015).

And despite all the progress in entrepreneurial research and gendered leadership, the “new paradigm” of entrepreneurial leadership (EL) (Fernald, Solomon, & Tarabishy, 2005) has not

benefited from these wider debates and developments. The literature in this field “has not been accompanied by appropriate theoretical frameworks, theory building and conceptual analysis, including gender analysis” (R. Harrison et al., 2015). EL discourse tends to move towards subordination by “rendering essentially invisible the gendered and sexual dimensions of much contemporary leadership practice” (Henry, Foss, Fayolle, et al., 2015; Sinclair, 2018).

The EL field is a relatively recently recognised research area with its own identity, and one that has emerged from studying the convergence of the entrepreneurship and leadership fields. This ‘new paradigm’ benefits from the mutual cross-fertilisation between the two areas, and its contribution is recognised as a factor in the success or failure of small- and medium-sized enterprises (C. Harrison, Burnard, & Paul, 2018; Leitch & Harrison, 2018; Leitch, McMullan, & Harrison, 2013; Renko, El Tarabishy, Carsrud, & Brännback, 2015; Simba & Thai, 2019) and large companies (Kuratko, 2007). For entrepreneurial activities to be successful, the leader needs certain competencies or attributes, defined as specific leadership capabilities (Cogliser & Brigham, 2004; Fernald et al., 2005; Gupta, MacMillan, & Surie, 2004). Although this field continues to evolve, its definition is not clear (Leitch & Harrison, 2018). Nonetheless, the definition proposed by Gupta et al. (2004) as a “leadership that creates visionary scenarios that are used to assemble and mobilize a ‘supporting cast’ of participants who become committed by the vision to the discovery and exploitation of strategic value creation” (Gupta et al., 2004) is generally accepted. A common thread to most definitions is that it is clearly grounded in the entrepreneurial literature by focusing on the traits, characteristics and behaviours of entrepreneurial leaders and leadership (R. Harrison et al., 2015). To advance with its definition and concept, it is important to identify and better understand which factors, attributes, skills, abilities, capabilities, characteristics or behaviours are considered the most valuable for entrepreneurs to overcome the challenges of managing an organisation. From a conceptual overlap approach between leadership and entrepreneurship (Roomi & Harrison, 2011), factors such as vision, influence, leadership of innovative and creative people, and planning (Cogliser & Brigham, 2004) stand out. From the perspective of personality traits and attributes or holistic vision, we find factors like achievement orientation, flexibility, passion, perseverance, overconfidence, stress resistance, assertiveness, competitiveness, opportunity detection, risk aversion, among others (Fernald et al., 2005; C. Harrison & Burnard, 2016; Nicholson, 1998; Renko et al., 2015; Vecchio, 2003).

However, information on how these attributes have been able to help entrepreneurs to overcome challenges, whether they can be learned or exercised, and whether a gender prism has been identified, is insufficient to date (C. Harrison et al., 2018; Kempster & Cope, 2010). Adequate tools to measure leaders’ entrepreneurial characteristics and behaviours are lacking (Renko et al., 2015) and no consensus has been reached (C. Harrison & Burnard, 2016). As several researchers state, the field is still searching for its identity (Leitch & Harrison, 2018; Leitch et al., 2013; Renko et al., 2015).

Exploring gender in the EL context allows us to look at the discipline from new and different perspectives by better recognising women’s EL experiences (Carter, Marlow y Bennett 2012). To

do this, we must move away from the entrenched approach that views EL as gender-blind, gender-neutral and gender-defensive (Patterson et al., 2012).

It is important to understand the starting point and approach taken by researchers of the emerging niche of factors in female EL (FEL) by avoiding reproducing the same gender bias errors that traditional entrepreneurship and leadership research reproduced. The purpose of this research is to understand the landscape of the foundational and structural basis of FEL factors and their trend. To do so, we apply the bibliometric method to the literature in this field to understand the trend of publications in productivity and influence terms. The following questions are answered: which articles are the most cited and constitute the intellectual base, which authors study this subject, which researcher groups have been formed and from which research approaches, what type of journals publish and from which countries, and in which major knowledge areas is this field being catalogued. Possible lenses and prisms through which this research is conducted are sought. The bibliometric methodology is applied with two approaches: a scientific performance analysis and graphically mapping the field (Cobo et al. 2011, Gaviria-Marín 2021). The former aims to assess the impact of the production and citations made to the scientific output of a specific study field for certain variables, such as authors, universities, articles, countries and journals. The latter includes the graphical mapping of science to show the structural and dynamic aspects of scientific research. They are often studied as a combination to validate and enrich the results of both. Therefore, the complementarity of both approaches allows a global picture to be built of a specific research field and its evolution by identifying areas of current interest to be employed within theoretical and empirical frameworks. Bibliometric studies are often used in a wide range of social science research fields, such as management (Podsakoff, MacKenzie, Podsakoff, & Bachrach, 2008), entrepreneurship (Luor, Lu, Yu, & Chang, 2014) and innovation (Cancino, Merigó, Coronado, Dessouky, & Dessouky, 2017).

The structure of this article is as follows. Firstly, the bibliometric methods applied and the search methodology to obtain the database are discussed. The next section presents the results: a survey of publications, authors, countries, journals and research areas and keywords together with a detailed graphical analysis of the bibliographic data networks using VOSviewer software. To conclude, the main conclusions of the study and its limitations are addressed, identifying possible future research.

2. BIBLIOMETRIC METHOD

In this study, a bibliometric analysis is used to assess where the most active influential research focus on this topic lies. Bibliometric methods are recognised as scientific specialties, form an integral part of the research evaluation and quantification methodology, especially in scientific and applied fields (Ellegaard & Wallin, 2015), and are increasingly employed to study various aspects of science (Hood & Wilson, 2001) like the business and management field (Gaviria-Marín 2021). To obtain an overview of the studied field, different procedures can be applied, such as a scientific performance analysis or the graphical mapping of science (Gaviria-Marín 2021; Merigó, Gil-Lafuente, & Yager, 2015).

To carry out a bibliometric performance analysis, indicators are used to measure academic production or its influence (Cancino, Merigó, Coronado, Dessouky, & Dessouky, 2017; Merigó & Yang, 2017) based on a content or citation analysis by data collection and management (Wallin, 2005; Martínez, Herrera, Contreras, Ruíz, & Herrera-Viedma, 2014). The results are about the total number of papers published during a given time period (TP), the impact of these publications (TC), the average number of citations per article (TC/TP), the most relevant authors, the most representative journals (Thongpapanl, 2012), an author's h-index (Hirsch, 2005; Alonso, Cabrerizo, Herrera-Viedma, & Herrera, 2009), the journal's impact factor (IF) (Garfield, 1972) and data on the geographical distribution of publications like country of origin (Bonilla, Merigó, & Torres-Abad, 2015). One of the main bibliometric indices to evaluate researchers' scientific performance (Alonso et al., 2009) is the h-index, which was introduced (Hirsch, 2005) to consider the quantity and impact of their publications. It is also used to measure different actors' scientific performance (Alonso et al., 2009), such as journals (Braun, Glänzel, & Schubert, 2006), countries (Guan & Gao, 2008), institutes or universities (Schubert, 2007). The second approach provides a network analysis with graphical maps based on bibliographic data. The VOSviewer software (version 1.6.15 (0)) (Van Eck & Waltman, 2010) was used to create and visualise them. VOSviewer is a free software that allows information to be graphically represented and analysed, such as citation analyses, co-citations of journals, bibliographic coupling by authors and countries, and co-occurrence of author keywords (Boyack & Klavans, 2010; Merigó, Pedrycz, Weber, & de la Sotta, 2018; Zupic & Čater, 2015). It also visualises the connections between these variables (Merigó, Cancino, Coronado, & Urbano, 2016). These techniques, when combined with a network analysis, allow the bibliometric structure and intellectual structure of the research field to be presented (Donthu, Kumar, Mukherjee, Pandey, & Lim, 2021).

The structure to obtain the bibliographic base follows Callahan's recommendations (Callahan, 2010): Our first step was to query the core collection of the Web of Science (WoS) database. WoS is a digital bibliographic platform considered to be one of the main providers of collections with more than 15,000 publications and 50,000,000 articles or studies that are relevant for the evaluation of the world's scientific production (Baier-Fuentes, Merigó, Amorós, & Gaviria-Marín, 2019; Merigó et al., 2015). Although alternative databases exist, the material included in WoS is expected to be of the highest quality standards (Merigó et al., 2015). The employed indices are: SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH, ESCI, CCR-EXPANDED and IC.

Secondly, we defined appropriate search terms using search equations Topic: ("leader*" and "entrepre*"), combined with factors or skills by including all the relative terms: AND Topic: ("abilit*" or "capabilit*" or "attribut*" or "skill*" or "factor*" or "competenc*" or "behavior*" or "trait*" or "feature*"). The following filter was added to obtain gender-focused results: AND Topic: ("female" or "gender" or "wom*" or "femin*").

Thirdly, the time frame was defined. The selected period was 2000-2020¹, which is long enough to understand how the literature in this field has evolved. The results were refined by choosing only articles and reviews and, to not exclude countries of authorship, articles published in all languages were included. As 15 publications had no publication date, a decision was made to always include the early access date as a preference in counts to reach 18 publications².

3. RESULTS

The main results of the bibliometric analysis of the production and the graphic map applied to the records linked with LEF research are presented below. The search process obtained 183 publications distributed into 176 articles and seven reviews.

1. Publications: distribution per year and citation structure.

The number of publications per year that address the topic of leadership factors in entrepreneurship with a gender approach has grown in the last 6 years of our study period (see Fig. 1). In 2000, no publications were recorded, and the object of this research was hardly of interest from 2001 to 2012. It was from 2013 when the field began to have timidly draw the scientific community's attention. Publications increased and became more sustained during the 2015-2020 period, with almost 85% of all the published articles, and an average of almost 26 articles per year, and an average of 40 in the last 2 years alone.

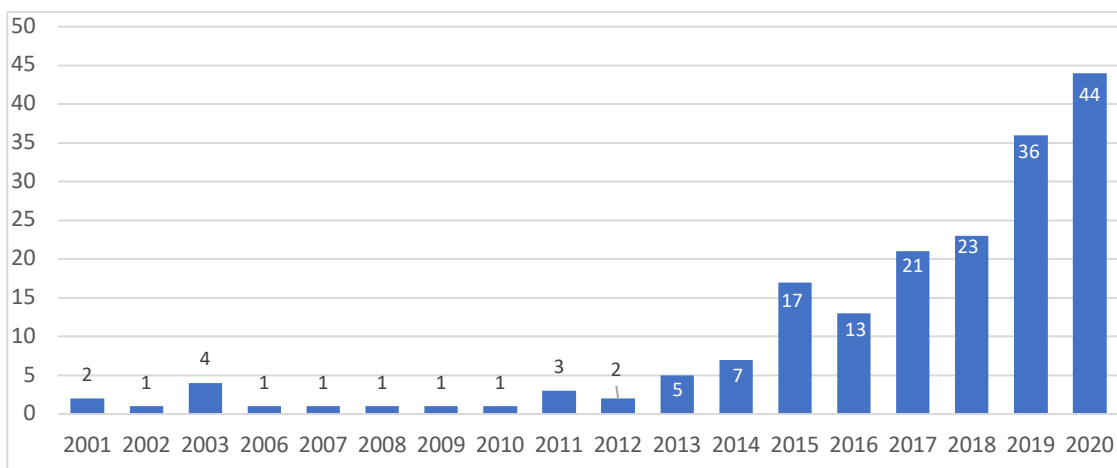


Fig. 1 Distribution of documents published per year for research into FEL factors (2000–2020)

Source: the authors based on data from the WoS.

However, understanding these leadership factors in female entrepreneurship (FE) is still an emerging field as 81% of the papers indexed in the WoS database had less than 10 citations

¹ The WoS database extraction date was 23 January, 2021.

² Early access articles are fully peer-reviewed, citable and published, but have not yet been assigned any volume/number/page number (source: WoS).

according to Table 1. This highlights the little influence the papers in this specific research field have had. The general citation structure allowed us to analyse the amount of documents related to a citation threshold to be analysed (Cancino et al., 2017). Thus 26% of the indexed papers had no citations at all, 91% were cited less than 20 times, and only one document had at least 200 citations.

Table 1
General citation structure

Citations	Total papers	%
≥ 200 citations	1	0.5%
≥100 citations < 200	2	1.1%
≥ 50 citations < 100	3	1.6%
≥ 20 citations < 50	10	5.5%
≥10 citations < 20	18	9.8%
≥1 citation < 10	101	55.2%
= 0 citation	48	26.2%
Total Papers	183	100%

Source: The authors based on the WoS.

The annual citation structure of the published documents (see Table 2) showed that the year with the most citations was 2001 with 313, followed by 2015 with 239. The most cited articles usually appeared in the most remote years because an article needs a 3-7-year period to obtain the most citations (Wang, 2013). This basis revealed, however, that 90% of the articles were published in the most recent years during the period 2013-2020 with more than 60% of all the citations.

By way of conclusion, the interest shown in leadership factors topic in FE has grown, but researchers' interest has only been modest since 2015. This finding highlights the novelty of the field, but papers have a low citation rate compared to the general entrepreneurship field.

Table 2 Annual citation structure for research into female entrepreneurial leadership factors research.

Year	TP	TC	≥ 200	≥ 100	≥ 50	≥ 20	≥ 10	≥ 1
2000	0	0	0	0	0	0	0	0
2001	2	313	1	2	2	2	2	2
2002	1	119	0	1	1	1	1	1
2003	4	83	0	0	1	1	2	4
2004	0	0	0	0	0	0	0	0
2005	0	0	0	0	0	0	0	0
2006	1	5	0	0	0	0	0	1
2007	1	16	0	0	0	0	1	1
2008	1	2	0	0	0	0	0	1
2009	1	6	0	0	0	0	0	1
2010	1	5	0	0	0	0	0	1
2011	3	14	0	0	0	0	0	2
2012	2	28	0	0	0	0	2	2
2013	5	123	0	0	1	2	5	5
2014	7	90	0	0	1	1	2	7
2015	17	239	0	0	0	5	8	17
2016	13	53	0	0	0	0	1	8
2017	21	105	0	0	0	1	3	19
2018	23	136	0	0	0	2	4	18

2019	36	132	0	0	0	1	3	27
2020	44	24	0	0	0	0	0	18
Total	183	1493	1	3	6	16	34	135
%	100%		0.5%	1.6%	3.3%	8.7%	18.6%	73.8%

Note: Abbreviations: TP: Total Papers; TC: Total number of citations; Number of papers with \geq of 200, 100, 50, 20, 10 and 1 citation/s. Source: The authors based on the WoS with Excel.

These results fall in line with researchers' findings in this field, who conclude that, although EL has been studied for several decades, it still has no clear identity because no tools have been developed to assess these factors (behaviours, skills or characteristics) in the field (Leitch et al., 2013; Renko et al., 2015).

2. The most influential articles in female EL research

This section analyses the most influential and popular articles in the database. The indicators used for this purpose were citations received (TC) (Baier-Fuentes et al., 2019; Donthu et al., 2021) and the citations that the article received on average the year it was published (TC/Y). This relative ratio allows the influence of the article to be compared regardless of the year when it was published (Gil-Gomez, Oltra-Badenes, Guerola-Navarro, & Zegarra Saldaña, 2021).

Table 3 The 20 most cited documents between 2000 and 2020 in WoS Core

No.	TC	Title	Authors	Year	TC/Y
1	212	The ambitions entrepreneur: High growth strategies of women-owned enterprises	Gundry, LK; Welsch, HP	2001	11
2	119	Leadership and gender advantage	Vecchio, RP	2002	6
3	101	Examining female entrepreneurs' management style: An application of a relational frame	Buttner, EH	2001	5,1
4	61	Generating political will for safe motherhood in Indonesia	Shiffman, J	2003	3,4
5	58	A cross cultural study of gender-role orientation and entrepreneurial self-efficacy	Mueller, Stephen L.; Dato-on, Mary Conway	2013	7,1
6	53	Gender disparity in the C-suite: Do male and female CEOs differ in how they reached the top?	Fitzsimmons, Terrance W.; Callan, Victor J.; Paulsen, Neil	2014	7,6
7	47	The Influence of Social and Human Capital in Developing Young Women as Entrepreneurial Business Leaders	McGowan, Pauric; Cooper, Sarah; Durkin, Mark; O'Kane, Caroline	2015	8
8	38	Sustainable business models, venture typologies, and entrepreneurial ecosystems: A social network perspective	Neumeier, Xavier; Santos, Susana C.	2018	12
9	29	Don't Pitch Like a Girl!: How Gender Stereotypes Influence Investor Decisions	Balachandra, Lakshmi; Briggs, Tony; Eddleston, Kim; Brush, Candida	2019	15
10	29	Political Empowerment, Rule of Law, and Women's Entry into Entrepreneurship	Goltz, Sonia; Buche, Mari W.; Pathak, Saurav	2015	4,8
11	28	The dearth of daughter successors in family businesses: Gendered norms, blindness to possibility, and invisibility	Overbeke, Kathyann Kessler; Bilimoria, Diana; Perelli, Sheri	2013	4
12	27	Developing women leaders through entrepreneurship education and training	Bullough, Amanda; de Luque, Mary Sully; Abdelzaher, Dina; Heim, Wynona	2015	4,5
13	26	Academics' entrepreneurship propensities and gender differences	Goel, Rajeev K.; Goktepe-Hulten, Devrim; Ram, Rati	2015	4,3
14	25	How prepared are academic administrators? Leadership and job satisfaction within US research universities	Morris, Tracy L.; Laipple, Joseph S.	2015	4
15	20	Narcissistic rhetoric and crowdfunding performance: A social role theory perspective	Anglin, Aaron H.; Wolfe, Marcus T.; Short, Jeremy C.; McKenny, Aaron F.; Pidduck, Robert J.	2018	7
16	20	Individual dynamic managerial capabilities: Influence over environmental and social commitment under a gender perspective	Buil-Fabrega, Marian; del Mar Alonso-Almeida, Maria; Bagur-Femenias, Llorenç	2017	5
17	19	What drives future business leaders? How work values and gender shape young adults' entrepreneurial and leadership aspirations	Lechner, Clemens M.; Sortheix, Florencia M.; Obschonka, Martin; Salmela-Aro, Katariina	2018	6

18	17	The Role of Competencies in Shaping the Leadership Style of Female Entrepreneurs: The Case of North West of England, Yorkshire, and North Wales	Bamiatzi, Vassiliki; Jones, Sally; Mitchelmore, Siwan; Nikolopoulos, Konstantinos	2015	3
19	16	Leadership styles and corporate social responsibility management: Analysis from a gender perspective	del Mar Alonso-Almeida, Maria; Perramon, Jordi; Bagur-Femenias, Llorenç	2017	4
20	16	Entrepreneurial leadership competencies among Malaysian university student entrepreneurial leaders	Bagheri, Afsaneh; Pihie, Zaidatol Akmaliah Lope; Krauss, Steven Eric	2013	2
<i>Abbreviations: TC: Total number of citations; TC/Y: It is the total of citations on the number of years that the document has been published.</i>					

Source: Obtained from the VOS viewer software.

Table 3 shows the 20 most cited articles. Authors like Gundry and Welsh, Vecchio and Buttner have published the three most influential articles for receiving the most citations between 2001 and 2003. The most cited article (212) is that by Gundry and Welsh (2003). The article with the highest ratio of citations received per publication year (TC/Y) was that of Balachandra, Briggs, Eddleston and Brush which, despite being published in 2019, has obtained 15 citations per year. It was followed by the article by Neumeier and Santos (2019) with 12.

The most influential article investigated high-growth strategies in a group of women entrepreneurs in the industrial sector “beyond examining the relationship between gender and (personal) entrepreneurial characteristics” (Gundry & Welsh, 2001) with a descriptive approach, but without a theoretical framework.

Vecchio studied sex/gender differences in social behaviour and leader effectiveness, and concludes that claims of gender comparative advantage, based on stereotypical reasoning, are exaggerated. So for him a “fine-grained” analytical approach is essential as is “including the temporal dimensions and the leader’s perceived tolerance of demographic differences” (Vecchio, 2002). The same author in 2003 situated entrepreneurship as a type of leadership, but without recognising the EL field in its own right (Vecchio, 2003).

Buttner delved into differences in leadership between men and women from a feminist social perspective with an exploratory content analysis. Her results showed that the relational theory is a useful framework for identifying and explaining the interactive style of women entrepreneurs in their own firm (Buttner, 2001).

Balachandra et al. (2019) broke away from traditional patterns and employed the gender role congruence theory to demonstrate that women entrepreneurs do not experience prejudice from venture capitalists because they are women, but when they exhibit strongly stereotypical feminine behaviours. Masculinity does not provide any advantage in venture capital pitches, but femininity provides a disadvantage (Balachandra, Briggs, Eddleston, & Brush, 2019).

We observe that the most influential articles in FEL still reproduce the same pattern of contemporary research into gender and entrepreneurship with a descriptive approach, but without a theoretical framework. This reproduces discriminatory gender relations. To leave aside “this impasse”, an alternative and conceptually informed feminist critique with a poststructuralist approach is needed (Henry, Foss, Ahl 2015).

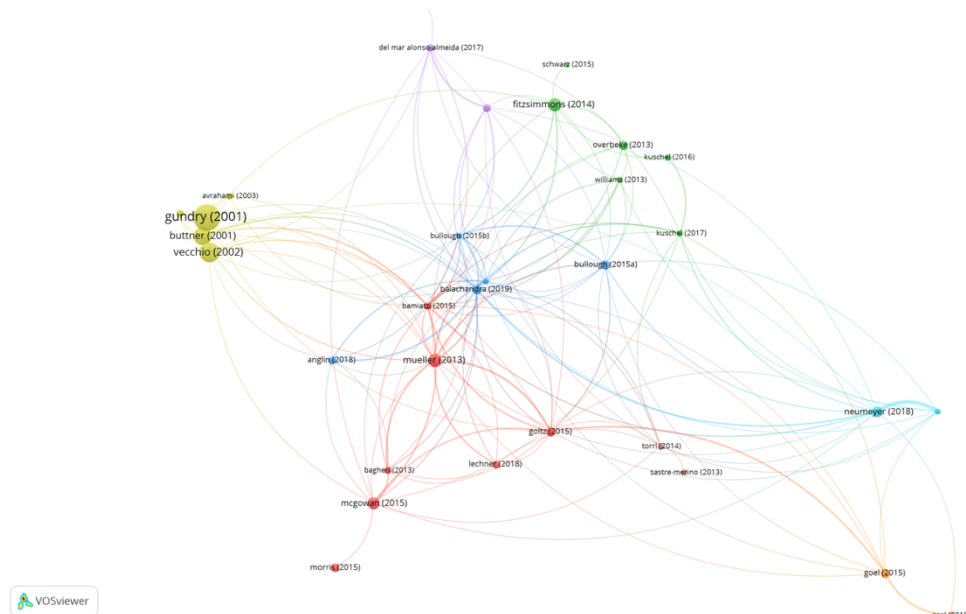


Fig. 2 Bibliographic Coupling of Documents

Source: VOSviewer

Do these most influential articles have similar contents?

One of the cartographic techniques that allows us to find is bibliographic linking. It examines whether two publications that share common references also have similar contents (Kessler, 1963). It divides publications into thematic groups based on the shared references which allow certain recent and niche publications to gain visibility by providing insight into the latest advances (Donthu et al., 2021).

According to Figure 2, with a minimum of 10 citations per article, this results in 32 articles, organised into eight clusters of bibliographically coupled documents. The most influential cluster with the most citations is the yellow cluster formed by Gundry, Vecchio, Buttner and others, who all published between 2001 and 2007 with a feminist social or women's management approach by a traditional methodology that perpetrates women's subordination. The largest cluster is the red one with seven articles sharing a bibliography. The article by Mueller et al. (2013) is bibliographically coupled to the articles by Bagheri (2013), McGowan et al. (2015), Bamiatzi (2015), Morris (2015), Goltz (2015), and most recently to Lechner (2018). All these articles address entrepreneurship and leadership from a social construction and contextual gender research approach. Bagheri et al. (2013) and Goltz (2015) cite the EL field in its own right. The most recent cluster is that formed by Balachandra (2019), Bullough (2015), Anglin (2018) and Hmieleski (2019), showing how stereotypes are socially constructed and impact FE. The green cluster led by Fitzsimmons (2014) shares a group that highlights some articles on CEOs and family entrepreneurship.

3. The most productive and cited publication sources in research

The studied articles are published in more than 140 journals. Table 4 shows the 20 most productive journals (TP) with some bibliometric indicators, such as the total number of citations

received by articles (TC) and their distribution in thresholds, the h-index (H), the average number of citations per article (TC/TP), the IF and the percentage of articles on the total base per journal (% TP).

Performance differs depending on the employed indicator. The most productive journals are the Journal of Small Business Management (JSBM) and the International Journal of Gender and Entrepreneurship (JGE). In turn, the journal with the most cited articles is the Journal of Business Venturing (JBV), followed by Leadership Quarterly (LQ), which are the journals with the highest IF. These journals, together with Small Business Economics (SBE) and Journal of Cleaner Production (JCP), have a recognised reputation with an IF2020 over 6 for their high scientific productivity level, and also for publishing papers with a citation threshold of over 100. However, the Journal of Business Ethics (JBE) has the best citation-to-article ratio ahead of JBV and LQ. The citation structure revealed that only three journals have published one article or more with at least 100 citations or more, LQ with two, and JBV and JBE with one. It is worth noting that a journal like SBE, which ranks 4th in the IF of the presented base, has no cited articles. This is because the three articles it has published were early accessed in November and December 2020 (see Table 5), which left no time for it to be cited. The journals that stand out as the most influential and productive are some of the most important ones in the entrepreneurship, management and organisational theory fields.

Table 4 Citation structure of the journals that publish the most.

Journal	TP	TC	H	TC/ TP	IF ₂₀₂₀	IF _{5 years}	% TP	≥ 200	≥ 100	≥ 50	≥ 10	≥ 1
Journal of Small Business Management	8	118	6	15	4.544	6.799	4.4%	0	0	0	2	3
International Journal of Gender and Entrepreneurship	6	16	3	3	NA	NA	3.3%	0	0	0	0	0
Journal of Cleaner Production	4	60	2	15	9.297	9.444	2.2%	0	0	0	2	2
Advances in Developing Human Resources	4	1	1	0	NA	NA	2.2%	0	0	0	0	0
Journal of Technology Transfer	4	53	3	13	5.783	6.552	2.2%	0	0	0	1	3
Management Decision	4	26	2	7	4.957	4.816	2.2%	0	0	0	0	1
Small Business Economics	3	0	0	0	8.164	8.139	1.6%	0	0	0	0	0
Journal of Business Venturing	3	243	3	81	12.065	15.732	1.6%	1	1	1	2	3
International Entrepreneurship and Management Journal	3	65	2	22	5.94	6.458	1.6%	0	0	1	1	1
Journal of Developmental Entrepreneurship	3	0	0	0	NA	NA	1.6%	0	0	0	0	0
Journal of East European Management Studies	2	6	1	3	0.821	1.016	1.1%	0	0	0	0	0
Gender In Management	2	3	1	2	2.293	2.425	1.1%	0	0	0	0	0
Pertanika Journal of Social Science and Humanities	2	0	0	0	NA	NA	1.1%	0	0	0	0	0
Journal of Entrepreneurship in Emerging Economies	2	3	1	2	NA	NA	1.1%	0	0	0	0	0
Academia-Revista Latinoamericana de Administracion	2	18	2	9	1.108	1.255	1.1%	0	0	0	0	1
Frontiers In Psychology	2	1	1	1	NA	NA	1.1%	0	0	0	0	0
Career Development International	2	10	2	5	3.792	4.03	1.1%	0	0	0	0	0
Ciriec-España Revista De Economía Publica Social Y Cooperativa	2	3	1	2	NA	NA	1.1%	0	0	0	0	0
Leadership Quarterly	2	172	2	86	10.517	11.319	1.1%	0	1	2	2	2
Journal of Business Ethics	1	101	1	101	6.43	7.83	0.55%	0	1	1	1	1

Abbreviations in Table 2; H: h-index investigation base; IF: Index Factor; NA: not available

Source: The authors based on WoS with BibExcel.

Following the classification by Baier et al. (2019), we distributed the journals in our database into the following main categories: entrepreneurship journals (International Entrepreneurship and Management Journal, Entrepreneurship and Regional Development, International Journal of Entrepreneurship Behavior & Research, Journal of Social Entrepreneurship among others); business and enterprise journals (Journal of Business Venturing, Journal of Business Research, Small Business Economics, Journal of Business Ethics), management journals (Management Decision, Journal of Management Studies, Journal of Management), human resources journals (Advances in Developing Human Resources), ethics journals (Journal of Business Ethics), environmental journals (JCP), psychology journals (Frontiers In Psychology), gender journals (International Journal of Gender and Entrepreneurship, Gender In Management), technology journals (JTT), science and humanities journals (Pertanika Journal of Social Science and Humanities), and journals that fell into several categories like Management and Business at the same time (Journal of Small Business Management).

Table 5 Evolution of publications per journal over time (2000-2020).

Journal	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	Total
Journal of Small Business Management (USA)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	4	1	8
International Journal of Gender and Entrepreneurship (England)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	2	0	6
Journal of Cleaner Production (USA)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	4
Advances in Developing Human Resources (USA)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4
Journal of Technology Transfer (USA)	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2	0	4	
Management Decision (England)	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	2	4
Small Business Economics (Netherlands)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3
Journal of Business Venturing (USA)	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	3
International Entrepreneurship and Management Journal (USA)	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	3
Journal of Developmental Entrepreneurship (Singapore)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	3
Journal of East European Management Studies (Germany)	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	2
Gender In Management (England)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
Pertanika Journal of Social Science and Humanities (Malaysia)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2
Journal of Entrepreneurship in Emerging Economies (England)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2
Academia-Revista Latinoamericana de Administracion (Colombia)	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	2
Frontiers In Psychology (Switzerland)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
Career Development International (England)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	2
Ciriec-España Revista de Economía Publica Social y Cooperativa (Spain)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	2
Leadership Quarterly (USA)	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2
Journal of Business Ethics (Netherlands)	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1

Abbreviations in Table 2.

Source: The authors based on WoS.

By analysing the evolution of journal publications with time, Table 5 shows how journals are residual and random over time and do not follow a pattern of continuity. However, we see how the pioneering journals that publish are JBV, JBE and LQ, but they do not continue to publish on

the topic with a gender focus. The journals that have emerged in the last 2 years are *Advances in Developing Human Resources*, which has published four research papers in the last year of our study period, and *SBM* with four papers in the last 2 years.

Finally, 35% of the journals with published research are based in the USA and 25% in the UK. The remaining 20% come from Western European countries. As Ahl (2004) points out, discursive practices are followed to produce research articles. Writing and publication practices, disciplinary norms and institutional support play an important role in shaping research texts because they guide and limit conversation (Huff, 1999). In this case, the literature base is published in journals dominated by an American institutional order that reproduce particular practices, and is also framed within business and entrepreneurship journals.

4. Research area

Table 6 shows the categories per research area. Here 60% of the articles in our research belong to the Economics and Business category with 110 publications, and 1,130 citations in all. Psychology, Social Sciences and Education and Engineering are research areas that also stand out in this base, among others.

The FEL subject area has several areas in which researchers publish (although the economics and business category predominates), which is also reflected in the many journals chosen with different themes, as seen in the section on publication sources. This is because EL is interchangeably associated with two fields that are normally taken as separate areas: leadership (associated with people management and psychology) and entrepreneurship (associated with the management and business areas). However a few decades ago, several scholars started drawing parallels between the two (Lippitt, 1987; Vecchio, 2003; Gupta et al., 2004; Coglisser & Brigham, 2004; C. Harrison & Burnard, 2019) by taking different positions and perceiving EL as either an entrepreneurship subdomain or a leadership type. Recently, there has been a shift towards a holistic approach that conceives EL as a field that benefits from the mutual cross-fertilisation of both fields (Leitch & Harrison, 2018; Karpinskaia & Shirokova, 2019), but debate about the fragmented approach to the discipline base still persists today (R. Harrison et al., 2015).

Table 6 Main research and citation structure areas.

Research Area	TP	%	TC	H	TC/TP	≥ 200	≥ 100	≥ 50	≥ 20	≥ 10	≥ 1
Business & Economics	110	60.1%	1130	16	10	1	3	5	12	23	82
Psychology	13	7.1%	224	5	17	0	1	2	3	3	11
Social Sciences – Other Topics	13	7.1%	148	5	11	0	1	1	1	2	10
Education & Educational Research	10	5.5%	62	3	6	0	0	0	1	3	9
Engineering	10	5.5%	123	5	12	0	0	0	3	5	8
Science & Technology – Other Topics	8	4.4%	73	4	9	0	0	0	2	2	6
Environmental Sciences & Ecology	6	3.3%	69	3	12	0	0	0	2	2	5
Agriculture	5	2.7%	25	3	5	0	0	0	0	1	5
Development Studies	5	2.7%	30	3	6	0	0	0	0	1	4
<i>Abbreviations are shown in Table 2.</i>											

Source: The authors based on WoS with BibExcel.

5. Most prolific and influential authors and cooperation

This section aims to identify not only the highest performing and most influential authors, but also the distribution by the citation thresholds of publications among the more than 500 researchers in the FEL field of the database. Number of publications is used to obtain the most productive authors. To know the most influential authors, certain measures are employed, such as citations obtained, citations per publication or the h-index are used (Donthu et al., 2021).

Table 7 shows the 15 authors who have published the most articles in research, along with their respective institutions and countries of origin. It also includes the distribution per citation thresholds of their publications. Table 5 presents the most influential authors in terms of citations received or citations per publication. The results reveal that the most productive authors do not coincide with the most influential authors.

According to Table 4, the most productive authors are Goel and Goktepe-hulten with three published articles. Of the top 15 authors, only Neumeyer and Santos have received more than 50 citations for all their articles. Authors' h-index is used to measure authors' scientific performance or the employed database, but does not provide relevant information.

Table 7 The 15 authors who have published the most on the FEL factors topic.

No.	Author	University	Country	TP	TC	H	H*	TC/TP	≥100	≥50	≥10	≥1
1	Goel RK	Illinois State University	USA	3	40	2	21	13.3	0	0	2	2
2	Goktepe-hulten D	Lund University	SWEDEN	3	40	2	7	13.3	0	0	2	2
3	Santos SC	Rowan University	USA	2	50	2	9	25.5	0	0	2	2
4	Neumeyer X	University of North Carolina	USA	2	50	2	8	25.5	0	0	2	2
5	Bullough A	University of Delaware	USA	2	39	2	11	19.5	0	0	2	2
6	Deluque MS	Thunderbird Sch Global, Arizona Management	USA	2	39	2	13	19.5	0	0	2	2
7	Alonso Almeida MD	Autonomous University of Madrid	SPAIN	2	36	2	23	18	0	0	2	2
8	Bagurfemenias L	Pompeu Fabra University	SPAIN	2	36	2	11	18	0	0	2	2
9	Lepeley MT	Global Inst Qual Educ Execut Programs	USA	2	27	2	3	13.5	0	0	2	2
10	Kuschel K	Universidad del Desarrollo	CHILE	2	27	2	2	13.5	0	0	2	2
11	Obschonka M	Queensland University of Technology	AUSTRALIA	2	21	2	23	11	0	0	1	1
12	Bagheri A	University of Tehran	IRAN	2	16	1	9	8	0	0	1	1
13	Pihie ZAL	Universiti Putra Malaysia	MALAYSIA	2	16	1	8	8	0	0	1	1
14	Van Praag M	Copenhagen Business School	DENMARK	2	11	2	18	6.5	0	0	0	2
15	Bernardino S	Polytechnic Institute of Porto	PORTUGAL	2	6	1	3	3	0	0	0	2

Abbreviations: TP: Total Papers; TC: Total number of citations; H: Author h-index database; H: Author h-index (WoS).*

Source: The authors based on WoS with BibExcel.

However according to Table 8, the most influential authors are Gundry and Welsch because they are the most cited ones with 212 citations. They are followed by Vecchio, Buttner and Shiffman (with 119 citations). One possible explanation for this difference is that the most prolific authors (Goel and Goktepe-hulten) have obtained a few citations when publishing in the most recent years (2015, 2018 and late in 2019). In contrast, the most influential ones have published between 2001 and 2003. The time factor should be taken into account when constructing an author's influence because it takes a certain number of years before an article obtains a volume of citations (Wang, 2013). Another reason lies in researchers' publication journals. Goel and

Goktepe-hulten have published all their articles in Journal of Technology Transfer (JTT) in the management area, but have clearly focused on innovation and technology transfer, and not on a common publication area in the EL field (see the green cluster in Figure 6). This is also true for the two articles by Neumeyer and Santos in relation to the journals chosen for their publications, namely JTT and Journal of Cleaner Production (JCP). Neither of these journals belongs to the most influential journals in the entrepreneurship and leadership field, which are Journal of Business Venturing (JBV), Leadership Quarterly (LQ), among others (Ahl, 2004).

Table 8 The most cited authors in the research field.

No.	Author	University	Country	TC	TP	H	TC/TP	≥200	≥100	≥50	≥10	≥1
1	Gundry LK	DePaul University Chicago	USA	212	1	1	212	1	1	1	1	1
2	Welsch HP	DePaul University Chicago	USA	212	1	1	212	1	1	1	1	1
3	Vecchio RP	University of Notre Dame	USA	119	1	1	119	0	1	1	1	1
4	Buttner EH	University of North Carolina	USA	101	1	1	101	0	1	1	1	1
5	Shiffman J	Johns Hopkins University	USA	61	1	1	61	0	0	1	1	1
6	Dato-on MC	Rollins College	USA	58	1	1	58	0	0	1	1	1
7	Mueller SL	Griffith University	AUSTRALIA	58	1	1	58	0	0	1	1	1
8	Paulsen N	University of Queensland	AUSTRALIA	53	1	1	53	0	0	1	1	1
9	Callan VJ	University of Queensland	AUSTRALIA	53	1	1	53	0	0	1	1	1
10	Fitzsimmons TW	University of Queensland	AUSTRALIA	53	1	1	53	0	0	1	1	1
11	Neumeyer X	University of North Carolina	USA	50	2	2	25	0	0	0	2	2
12	Santos SC	Rowan University	USA	50	2	2	25	0	0	0	2	2
13	Cooper S	University of Edinburgh	SCOTLAND	47	1	1	47	0	0	0	1	1
14	Mcgowan P	Ulster University	NORTHERN IRELAND	47	1	1	47	0	0	0	1	1
15	Durkin M	Ulster University	NORTHERN IRELAND	47	1	1	47	0	0	0	1	1
16	O'kane C	NA	NORTHERN IRELAND	47	1	1	47	0	0	0	1	1
17	Goktepehulten D	Lund University	SWEDEN	40	3	2	13	0	0	0	2	2
18	Goel RK	Illinois State University	USA	40	3	2	13	0	0	0	2	2
19	Deluque MS	Thunderbird Sch Global	USA	39	2	2	20	0	0	0	1	2
20	Bullough A	University of Delaware	USA	39	2	2	20	0	0	0	1	2

Abbreviations in Table 7.

Source: The authors based on the WoS with BibExcel.

Thanks to these authors' affiliation data, we find that the most productive authors come mainly from US. Institutions, but with collaboration between several institutions from the same country or from other countries like Sweden and Australia. All this suggests cooperation.

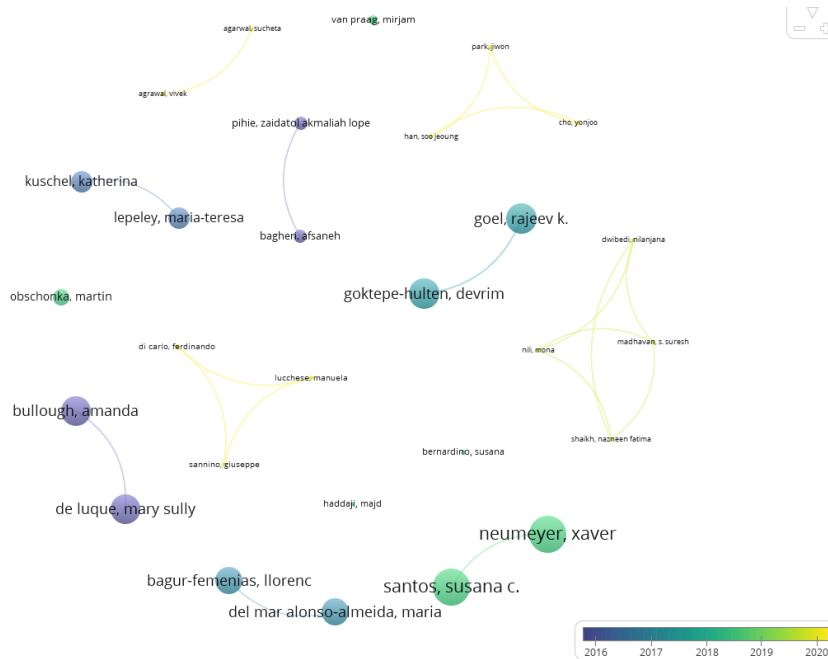


Fig. 3 Co-authorship per authors with overlay visualisation

Source: VOSviewer

To find out which authors collaborate consistently and have a stronger impact, and to gain insight into new emerging author cooperation trends (Zupic & Čater, 2015), we used the overlay visualisation of co-authorships per author (see Fig. 3). To visualise research trends, co-authors were overlaid with their average year of publication using colours to represent their temporal variation. The terms depicted in dark blue were published around 2015/2016 on average, green represents those with a mean year of publication at around 2018.5 and the year of publication of the keywords in yellow is around 2020. The graphical map in Figure 3 shows the 28 authors with a minimum threshold of two articles and zero citations. The oldest research group is Bullough and De Luque from the USA, which published around 2015, followed by Bagheri and Pihie who published around 2015.5 and are respectively from Iran and Malaysia. Lepeley and Kuschel (USA and Chile) published in mid-2016 on average. Bagur-Femenias and Alonso-Almeida (Spain) published two articles around 2017, with 33 on average. Goel and Goktepe-hulten follow with three articles around 2017 (USA and Sweden). The articles of Neumeyer and Santos (USA) have an average publication date of 2018. What is interesting about this graph is the emerging cooperation shown in yellow, such as Cho's South Korean group, Nili's US group, among others. The data in Figure 3, therefore, reveal interesting cooperation between authors from institutions of different geographical origins, such as the USA, Chile and Sweden, with at least two articles and origins other than the USA, which is the most productive country, and Spain or other emerging groups like that from South Korea.

6. Geographical distribution of the most productive and cited countries and collaboration per country

After analysing the geographical distribution of the papers, Table 9 shows publishers' top 15 countries of origin from the most numerous to the fewest articles and citations. The USA is the country with the most publications on the topic of women's EL factors with 61 publications, followed by Spain with 18, and Germany and England with 12. Once again, the citation structure differs from article production because, although the USA and Spain also received the most citations, Australia came third, followed by Canada.

Table 9 15 Countries that publish the most on the entrepreneurial leadership factors topic.

No.	Country	TP	TC	H	TC/TP	≥ 200	≥ 100	≥ 50	≥ 10	≥ 1
1	USA	61	975	14	16	1	3	5	21	36
2	SPAIN	18	110	6	6.1	0	0	0	4	6
3	GERMANY	12	56	5	4.7	0	0	0	2	7
4	ENGLAND	12	49	4	4.1	0	0	0	1	2
5	INDIA	11	16	2	1.5	0	0	0	0	5
6	CANADA	8	58	3	7.3	0	0	0	2	3
7	AUSTRALIA	7	89	3	12.7	0	0	1	2	3
8	PORTUGAL	6	54	3	9.0	0	0	0	1	2
9	THE NETHERLANDS	6	25	3	4.2	0	0	0	0	1
10	BRAZIL	5	4	1	0.8	0	0	0	0	3
11	SWEDEN	5	42	2	8.4	0	0	0	2	4
12	PEOPLES R CHINA	5	3	1	0.6	0	0	0	0	3
13	CHILE	4	38	4	9.5	0	0	0	1	3
14	FINLAND	4	33	3	8.3	0	0	0	2	2
15	U ARAB EMIRATES	4	10	2	2.5	0	0	0	1	1

Abbreviations in Table 2. H: h-index research database.

Source: The authors based on WoS with BibExcel.

To further analyse countries and their possible relationships, country co-authorship is proposed. This technique shows the most productive countries, and the degree of scientific communication and collaboration between them, by identifying those papers with more than one author (Merigó et al., 2018).

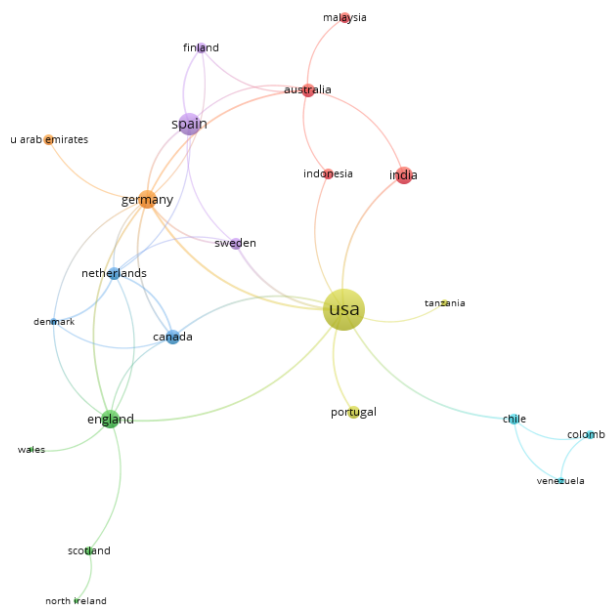


Fig. 4 Co-authorship per country

The graphical map in Figure 4 shows seven clusters with 22 countries with a threshold of one paper per country and 10 citations. It is worth noting that the largest nodes include the most influential countries in article production terms, in this case with the USA and Spain and, to a lesser extent, Germany, England and India. Relationship lines represent cooperation between countries and colours delimit clusters. It can be concluded that the USA cooperates with Portugal and Tanzania, while Spain, the second largest producer, cooperates with Finland and Sweden. Germany cooperates with United Arab Emirates and England, and has the same geographical cluster with Northern Ireland, Scotland and Wales. Once again, the USA is the most influential and dominant country in co-authorship terms.

7. Foundational theme and intellectual structure of the literature

We attempted to investigate the foundational intellectual structure on which LEF researchers have been based through the co-citation of publications, which occurs when two papers are cited in a third paper (Merigó et al., 2018). In this way, we can discover thematic clusters, seminal publications, and foundations of knowledge (Donthu et al., 2021) because frequently co-cited publications are thematically similar (Hjørland, 2013).

Figure 5 reflects the 17 papers with a minimum of 10 citations per reference. We observe two distinct thematic clusters. The red cluster is formed by articles on feminist approaches, led by Ahl's article where she encourages searching for new directions in research into women entrepreneurs. Ahl is a renowned Swedish researcher on FE who occupies a gender social constructionist position that encourages the choice of a poststructuralist epistemological research framework. The other cluster consists of authors researching factors in EL, mostly without a gender focus and others, like Shinnar, with a gender focus to reproduce the dominant male model.

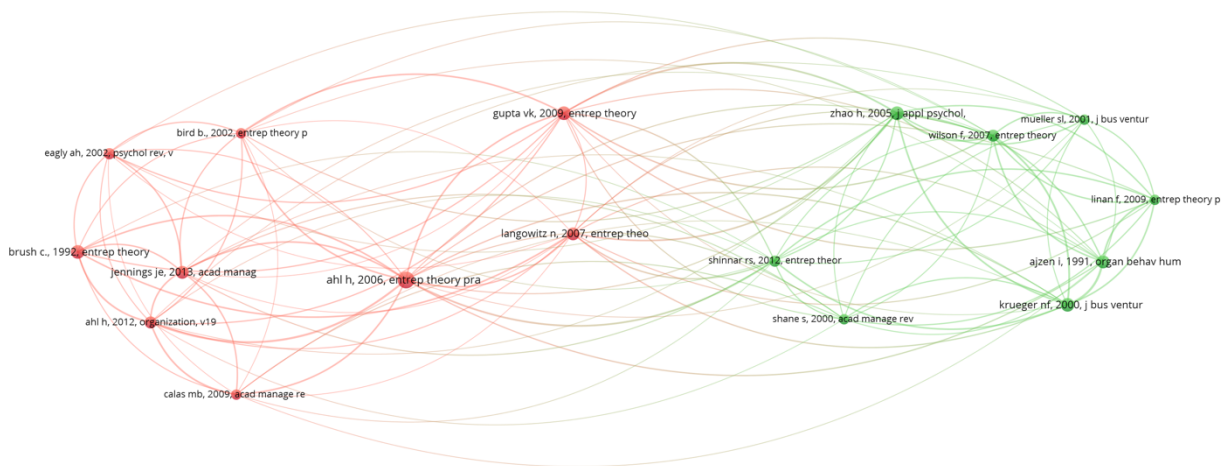


Fig. 5 Co-citation of references

An author co-citation analysis results when an author cites in his/her publication a paper by one author, together with a paper by another author and, therefore, aims to show the structure and connections of the authors most frequently cited together (Gaviria-Marin, Merigó, & Baier-Fuentes, 2019), and to understand the structure of the scientific community in a particular field. In Figure 6 with a minimum of 15 citations from one author, 40 met the threshold. We observe a bibliometric map on which citation connections are established between authors and form four thematic clusters. In the green node, Ahl appears again as the most co-cited. Ahl is co-cited with: De Bruin and Brush, who have articles together that suggest the scarcity of FE research; Kuratko, Shane and Harrison, who investigate the skills, intentions, competencies and capabilities that form part of EL with no gender prism. The blue node comprises mainly the female authors who explore gender in organisations and gender stereotypes. Eagly is an author who has researched leadership style and gender, and is co-cited with: Marlow, who investigates entrepreneurship from a feminist perspective; Bird and Gupta, who investigate the creation of organisations from a gender perspective; Heilman, who studies the impact of stereotypes for women in companies. Interestingly, the European Commission appears as a co-cited author. In the red node, we find Krueger, who is co-cited with Hofstede, Bandura, among others, who publish on leadership factors in entrepreneurship, such as entrepreneurial intentions, self-efficacy or the influence of culture, but do not address the gender approach.

Figure 7 analyses co-citations between journals to find out which journals disseminate the concept and whether they have a common thematic organisation or specialisations (Blanco-Mesa, Merigó, & Gil-Lafuente, 2017). The larger the node size, the more citations journals have received, and the smaller the distance between nodes, the higher the co-citation frequency, and *vice versa* (Liao et al., 2018). Sixty sources were obtained with a minimum threshold of 25 citations. The observed large scientific domains are as follows: the blue one with journals that form part of the same thematic organisation on business, economics and entrepreneurship (Entrepreneurship theory and practice (ETP), JBV, JSBM and SBE). The red group of journals stands out for belonging to areas like psychology, the study of human resources and leadership. It even includes women's studies, with the Journal of Applied Psychology (JAP) as a reference in terms of citations and links or LQ. The green cluster is related to the management area with Academy Management Review and Journal Management as the largest nodes for being the most cited. In this cluster we also find the JCP journal. Finally, the yellow cluster is the smallest one and contains journals like Journal of Vocational Behavior that deal with human behaviour and applied psychology, or even philosophy.

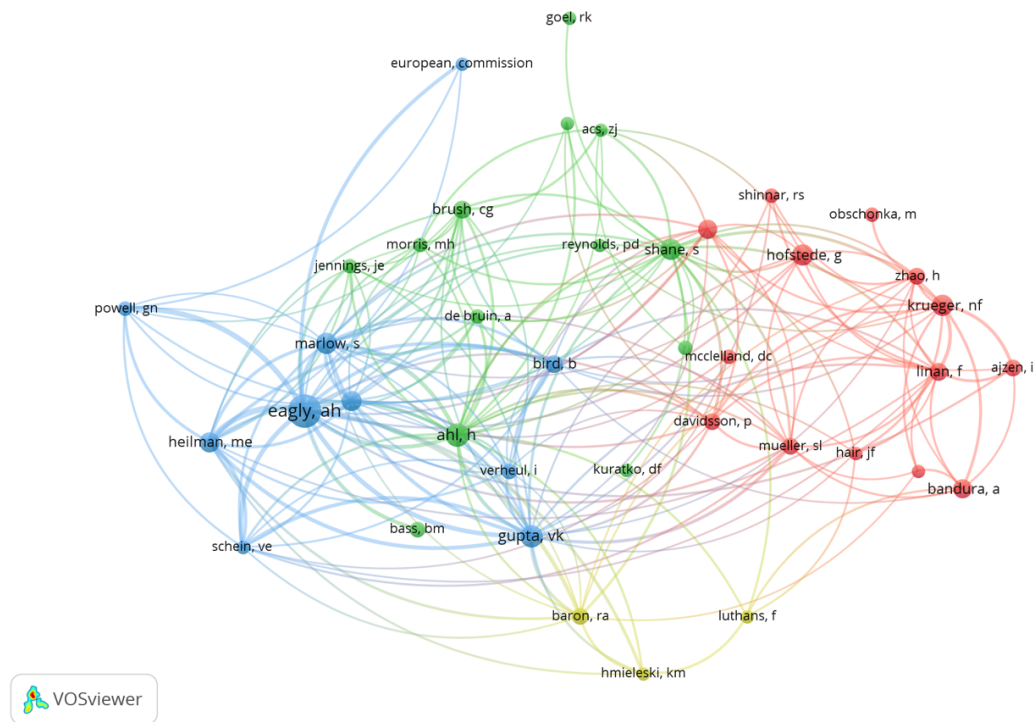


Fig. 6 Co-citation of authors

Source: VOSviewer

In conclusion, this graphical map analysis corroborates some of the common areas in which the cited journals are connected. It is interesting to see how the journal ETP stands out as one of the most co-cited journals because of its large node and its multitude of connections, but it only publishes one article on FEL factors. Journals such as Journal of Cleaner Production (JCP), Journal of Technology Transfer (JTT) and Advances in Developing Human Resources (ADHR) are among the most productive journals and are hardly co-cited.

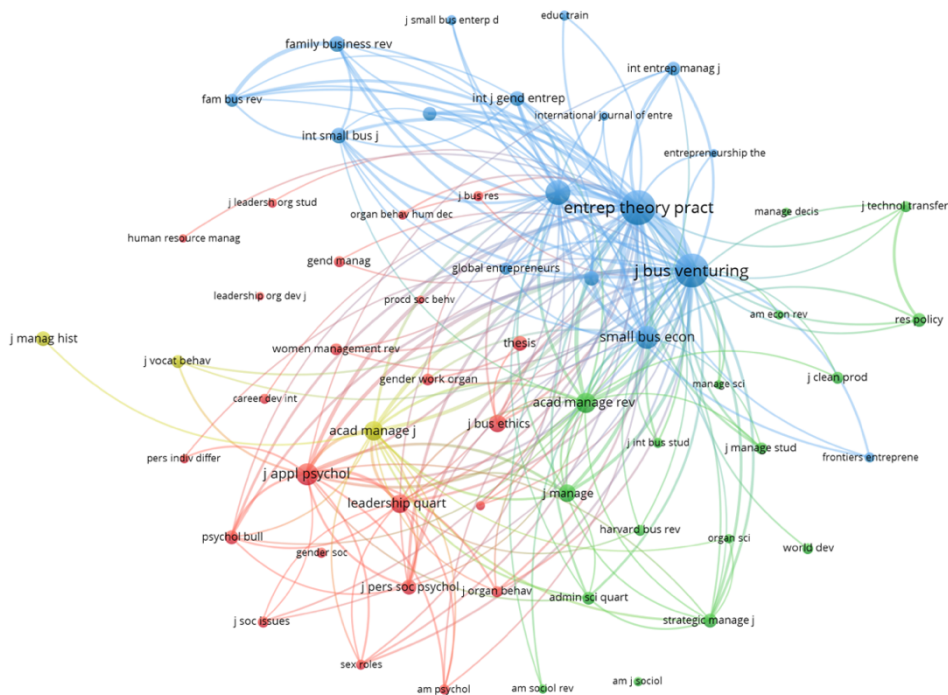


Fig. 7 Co-citation of Journals

Source: VOSviewer

8. Trends across keyword research: co-occurrences of author keywords.

A content analysis has the potential to discover emergent fields because it establishes relationships and builds a conceptual structure of the domain (Ellegaard & Wallin, 2015). Therefore, the main keywords in the document base were analysed with the co-occurrence of author keywords. When words co-occur frequently in documents, it means that the concepts behind those words are closely related (Zupic & Čater, 2015). This semantic field helps us to understand the cognitive structure because the result is a network of topics whose relationships represent the conceptual space of a field (Börner, Chen, & Boyack, 2003).

The present study identified the most frequent author keywords and those that most frequently appear in the same documents (Merigó et al., 2018). Table 10 shows the commonest author keywords with their respective co-occurrences and total link strength. Apart from logical main words like entrepreneurship, gender, leadership, among others, other words stand out: culture, family business, social entrepreneurship, innovation, self-efficacy, succession, sustainability, career development, competencies, education, development and management.

Table 10 Commonest author keywords

No.	keyword	occurrences	TLS
1	entrepreneurship	30	34
2	gender	27	30
3	leadership	18	21
4	entrepreneurial intentions	12	8
5	women	11	12
6	women entrepreneurs	9	3
7	family business	7	10
8	culture	7	10
9	social entrepreneurship	7	7
10	innovation	7	6
11	female entrepreneurship	5	5
12	self-efficacy	5	4
13	succession	4	8
14	sustainability	4	5
15	career development	4	4
16	women entrepreneurship	4	3
17	competencies	3	3
18	education	3	6
19	development	3	3
20	management	3	2

Abbreviations: TLS: Total Link Strength

Source: Obtained from the VOS viewer software.

Figure 8 shows the main keywords and takes a threshold of three occurrences of one keyword and the 100 most representative connections. Twenty-five keywords stand out, which means that for all the 25 keywords, the total strength of co-occurrence links with other keywords is calculated by selecting the keywords with the highest total link strength. To show research trends, author keywords were overlay visualised with their average year of publication using colours to represent their temporal variation. The terms depicted in dark blue were published around 2016 on average,

those in green have an average year of publication around 2018.5, and the average year of publication of the keywords in yellow is around 2020.

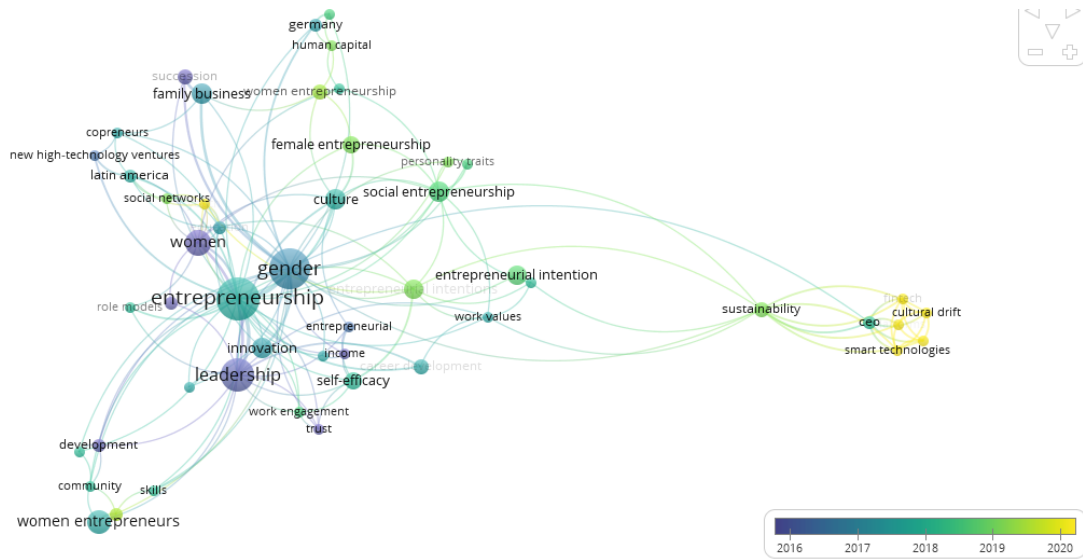


Fig. 8 Co-occurrence of authors keywords with overlay visualization

source: VOSviewer

The average year of publication of the terms leadership, management, women, development and trust is around 2016. The words gender, innovation or family business appear about 2017. Around 2018, the terms entrepreneurship, role model, equality, community, self-efficacy, skills or social entrepreneurship emerge. Halfway through 2019, the words entrepreneurial intentions, women entrepreneurs, female entrepreneurship, human capital, personal traits, skills, sustainable and social network are published on average. It is worth noting that roughly in 2018 and 2019 some entrepreneurial leadership factors appear: competences, skills, personality traits, self-efficacy, entrepreneurial intentions and social network. Approximately in 2020 on average, terms linked with fintech, platforms, smart technologies and young people start to emerge. This analysis reinforces that the field is young because we do not even observe the “entrepreneurial leadership” field term.

DISCUSSION AND CONCLUSIONS

Lessons learnt

A comprehensive bibliometric study of FEL factors is presented to provide an overview and understanding of the state of literature’s development in the field. It was carried out by means of two techniques used together, a bibliometric performance analysis and graphical mapping, by studying variables like articles, principal investigators, scientific journals, countries, research areas and keywords with their interrelations.

We conclude that:

(a) Scientific production was not significant until 2015, and is a young and underdeveloped research field in terms of the number of publications and citations (almost 85% of the articles were published between 2015 and 2020, and 81% of the papers indexed in the WoS database have fewer than 10 citations). All this reveals the novelty of the field with a gender focus.

(b) The most influential seminal article was by Ahl. She is a renowned Swedish researcher on FE from a social constructionist gender position that encourages the choice of a poststructuralist epistemological research framework. She is co-cited with De Bruin and Brush, who have articles together that state the paucity of FE research. Eagly is an author who has researched leadership style and gender, and is co-cited with: Marlow, who researches entrepreneurship from a feminist perspective; Bird and Gupta, who investigate organisation building from a gender perspective; Heilman, who studies the impact of stereotypes for women in business.

(c) Despite the influence of feminist perspectives on the base, the most cited articles by Gundry and Welsh (2001), Vecchio (2002) and Buttner (2001) and are coupled bibliographically, still reproduce the same pattern of contemporary research into gender and entrepreneurship with a descriptive approach, but include no theoretical framework (Henry, Foss, & Ahl, 2015). However, the article by Balanchandra et al. (2015), with a higher ratio of citations per year of publication, changes the research perspective. Following the structure proposed by Ahl (Ahl, 2003), these articles take different epistemological positions: that of Gundry et al. with that of Vecchio, and that of Buttner, do so with a traditional objectivist epistemological approach, with the former from an individualistic approach and the latter from a comparative approach. Balachandra does so from extended constructionist epistemology.

(d) The most productive journals are JSMB and IJGE. However, the most cited are JBV, followed by LQ. Interestingly, the pioneering journals were the US benchmark journals in entrepreneurship and leadership JBV, JBE and LQ, with the strongest influence given their many citations, but they stopped publishing in the field. JSBM ranks first in productivity terms in the last 5 years, together with the gender journal IJGE. Finally, 35% of the journals with published research are based in the USA and 25% in England. The remaining 20% come from Western countries. This reveals the possible existence of discursive practices that can guide and limit conversation (Ahl, 2004; Huff, 1999) both by the journal's country of origin (Anglo-Saxon countries USA and England in our case) and by these journals' category (mainly management, entrepreneurship and business). In journal co-citation terms, three clear specialisation areas appear: business and entrepreneurship; management and psychology; organisational behaviour. The cluster with the most co-citations and connections forms part of the same thematic organisation on business and economics with journals ETP, JBV, JSBM and SBE. The other journal to stand out is JAP. It appears in another cluster: the area of psychology and organisational behaviour.

(e) The predominant research areas are economics and business (60%) and, to a lesser extent, psychology and social sciences. EL is associated indistinctly with two fields that have usually been considered separate areas: leadership (associated with people management and psychology) and entrepreneurship (associated with the areas of management and business).

(f) The most productive authors are Goel (USA) and Goktepehulten (Sweden) with three articles, but the most cited are Gundry, Welsh and Vecchio (all the USA) with only one. This is probably due to their publication date (the more recent, the fewer citations received) and also to the chosen journals (for Goel and Goktepehulten, journals from very specific niches like technology where the EL field is not normally researched). Bibliographic linking by authors reveals close connections with similar, or even joint, research lines. This reveals interesting co-operations between authors from institutions in different geographical locations in the USA, jointly with Chile and Sweden, or in countries like Spain, or with other emerging groups like South Korea.

(g) Once again, the USA comes over as the most productive, influential and dominant country in citations, output and co-authorship terms. The USA dominates the publishing landscape in the studied field, followed by Spain, Germany and England. The citation structure differs insofar as the USA and Spain also receive the most citations, and Australia ranks third, followed by Canada. The USA collaborates with Portugal and Tanzania, and Spain with Finland and Sweden. England stands out in the same geographical group with Northern Ireland, Scotland and Wales.

(f) Trends in FEL factors, obtained by author keywords, focus on examining the relation linking entrepreneurship, leadership and gender, but reveal some trends like innovation and education, social entrepreneurship and sustainability or culture, family business or succession, etc.

With this bibliometric analysis, we can corroborate that the field of women's EL factors is still in its early days in research terms with barely any influence and production. American discourse occupies the dominant position in the discursive community in the FE field (Ahl, 2004), the leadership field and, as we have just shown, also in the field of FEL factors. Although the FE literature has significantly developed (Henry, Foss, & Ahl, 2015), there is still a long way to go in the discipline of FEL and its factors. Despite its seminal studies having scholars who encourage contributions to the field from broader poststructuralist perspectives, there is still a tendency to reproduce traditional gender-biased research approaches.

Main limitations

Of the main limitations, we firstly highlight that which derives from the nature of the bibliometric analysis, which is descriptive and exploratory. It provides the general orientation of the studied field in accordance with the different analysed variables.

Secondly, the obtained results are limited to the WoS Core Collection database which, despite being considered one of the most influential ones for classifying research, it may have some limitations like excluding journals or papers that are not indexed because they have recently appeared and which, for example, may be equally influential in this field. It is, therefore, acknowledged that had another database been chosen, the results and conclusions could have differed from those obtained.

Finally, our results represent the overall picture that was available until 2020, which may cause these results to substantially change in the future, and also due to low scientific output. Bibliometric data are dynamic depending on the period, output and impact received by different dimensions. Thus any results may vary in the years to come.

Future research lines

Future research directions include the need to look more closely at this field, and to continue research into the male dominant normative lens of both journals and scholars, to build a clear conceptual and empirical framework from a female social constructionist gender lens.

Another possible research line would be to analyse women entrepreneurs' own leadership factors, and to understand how they are manifested and constructed in different cultural and social contexts to approach the field with higher diversity and to enrich the construct. If the leadership factors of women entrepreneurs who are capable of driving success in entrepreneurship can be identified and assessed (Renko et al., 2015), then there will be excellent opportunities for this research to develop. By exploring all these issues, the intention is to improve available knowledge, and to outline appropriate actions or recommendations, to foster more pluralistic start-ups.

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CHAPTER IV. THE MOST IMPORTANT LEADERSHIP FACTORS IN FEMALE ENTREPRENEURSHIP

Article 3

The most important leadership factors in female
entrepreneurship.

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THE MOST IMPORTANT LEADERSHIP FACTORS IN FEMALE ENTREPRENEURSHIP

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ABSTRACT

Entrepreneurial leadership is a relatively recent study field, and one considered by many academics to be a new paradigm, that deserves to be studied from a gender focus given its impact on entrepreneurship development and performance. For entrepreneurial activities to be successful, specific leadership factors are needed. However, there is still not enough literature to clearly identify these leadership capabilities or behaviours, manifested during the entrepreneurial process, with a gender approach. This research proposes identifying the most important attributes of female entrepreneurial leadership through several stages. A systematic literature review identified a base of 71 articles was identified. Then, after a comprehensive review, 267 leadership factors were identified and collected. Finally, an occurrence analysis of factors indicated the most frequent factors were innovation, communication, network, passion, risk taking, vision and opportunity, among others. However, the findings revealed that no consensus has yet been reached on the theoretical and conceptual basis of the concept and its own factors. This paper aims to provide reliable knowledge from an evidence-based approach and to update information on entrepreneurial leadership capabilities by providing a more complete vision thanks to the gender perspective and by proposing recommendations for the future.

Keywords: Female entrepreneurship; entrepreneurial leadership; gender; identification of leadership factors; characteristics

INTRODUCTION

Leadership is a recognised driver of entrepreneurship (Felix, Aparicio, & Urbano, 2019) because, for entrepreneurial activities to be successful, leaders need certain competences, attributes or factors defined as specific leadership capabilities (Cogliser & Brigham, 2004; (Gupta, MacMillan, & Surie, 2004); Fernald, Solomon & Tarabishy, 2005). Consequently, research into leadership in entrepreneurship has been the subject of intense debate by scholars to understand the role of both, and has been solved by establishing a new field known as entrepreneurial leadership, which goes beyond the convergence of both fields (Cogliser & Brigham, 2004; Fernald et al., 2005). This “new paradigm” (Fernald et al., 2005) relates to leadership attributes across diverse entrepreneurial conditions and contexts (Gupta et al. 2004; Currie, Humphreys, Ucbasaran, & Mcmanus, 2008). Therefore, it is vital to identify and better understand which leadership

characteristics are considered the most valuable ones for overcoming the challenges of managing a new organisation or influencing a venture's success and growth.

Research into these attributes is insufficient and scattered because authors have taken different perspectives (Clark, Harrison, & Gibb, 2019), and no consensus has been reached on the theoretical and conceptual basis of the concept (C. Harrison & Burnard, 2016; Roomi & Harrison, 2011). It is unknown how factors enable entrepreneurs to overcome challenges, or whether they can be learned or exercised (C. Harrison, Burnard, & Paul, 2018; Kempster & Cope, 2010). There are also insufficient instruments to assess entrepreneurial characteristics and leaders' behaviours (Renko, El Tarabishy, Carsrud, & Brännback, 2015). Moreover, research into the characteristics of this field with a gender framework that can provide a more pluralistic approach is scarce to date (Kapil & Salgotra, 2018).

As entrepreneurial leadership (EL) is unequivocally "becoming a global necessity" for organisations, we must understand the elements that make up this concept because the more we know about it, the better "we can advance the concept itself" (Kuratko, 2007). We propose continuing to investigate these attributes by taking a more inclusive and holistic approach with a gender perspective. However, EL discourse has traditionally adopted a dominant male bias, where stereotypes with masculine characteristics have prevailed (Antunes, Abreu, & Rodrigues, 2020). Shifting from a focus on male experiences in entrepreneurship and leadership studies (Ahl, 2006; R. T. Harrison, Leitch, & Mcadam, 2015; Henry, Foss, Fayolle, Walker, & Duffy, 2015) to a more interpretive methodology that also takes into account women's experiences must be promoted (Calás, Smircich, & Bourne, 2009).

This study presents an identification and subsequent occurrence analysis of the female EL factors obtained by a systematic literature review (SLR), from the main Web of Science (WoS) collection and the Vosviewer software. It seeks to provide the field with updated and contextualised knowledge from a more pluralistic and holistic approach and to offer recommendations for future research by particularly referring to the female entrepreneurial process.

The remainder of this paper is as follows. Firstly, the theoretical background of EL is presented along with a compilation of characteristics organised according to the most relevant authors in the literature. The next section offers the methodology applied in several stages. The resulting SRL provides a census of the attributes collected and organised according to their frequency. Finally, the last sections discuss the findings, where the conclusions include the main contributions and recommendations, and identify future research directions.

THEORETICAL FRAMEWORK

1. Understanding female entrepreneurial leadership

EL has been the subject of numerous debates, probably due to the definition of the construct itself and its different essentially theoretical and conceptual perspectives (Kuratko, 2007; Vecchio, 2003). There is a wide variety of definitions from different academic fields. It can be generally agreed that entrepreneurial leadership has emerged from the leadership and

entrepreneurship fields converging, which reflects the need to adapt to the opportunities and challenges in entrepreneurial environments (Fernald et al., 2005). This results in the production of a new product or service, or overall organisational development (Kapil & Salgotra, 2018), “through the mobilisation of a “supporting cast” of participants who are committed by vision to the discovery and exploitation of strategic value creation” (Gupta et al. 2004).

2. Identifying entrepreneurial leadership factors

Despite the attempts made to define this emerging new paradigm from a variety of contexts and settings, EL characteristics remain broadly and largely unstructured (C. Harrison et al., 2018). Indeed various categorisations of factors can be found in the literature.

Following Roomi and Harrison (2011), a first approach would be to consider leadership and entrepreneurship to be separate constructs in which authors examine the intersection between both fields. Authors like Cogliser and Brigham (2004) identify specific “conceptual overlap” areas, such as vision, influence, leadership of innovative and creative people, and planning; see Figure 1. Fernald et al. (2005) take a similar approach by conducting systematic literature explorations of the two domains separately, and by identifying the following overlapping “characteristics”: vision, problem solving, decision making, risk taking, strategic initiatives. The limit of this approach lies in its descriptive, and not its analytical or explanatory, nature, and how to exploit these common characteristics is not suggested (Roomi & Harrison, 2011). A second approach by Roomi and Harrison (2011), the contextual approach, focuses on the aspects of the environment that will influence or condition the EL type. In this regard, Harrison et al. (2016) propose 29 attributes identified with an SRL. The third approach involves understanding EL from a holistic point of view. In this regard, Vecchio (2003) challenges the received definitions of the concept and concludes that “entrepreneurship is simply a type of leadership that occurs in a specific environment”. Vecchio’s (2003) stage model of EL incorporates both psychological and economic factors because some psychological factors are more critical than others in certain stages and are not uniformly positive. From the psychological perspective (Roomi & Harrison, 2011), EL is defined from a set of characteristics that are considered essential for entrepreneurial leaders or from personality traits. We find authors like Gupta et al. (2004), who have drawn up a list of 20 essential attributes for performing EL functions to develop a framework in organisational settings. Nicholson (1998) provides a personality profile of entrepreneurial leaders by studying some founders (Nicholson, 1998). They conclude that they are unique insofar as their character and motives are concerned. This approach considers personality traits like innate, stable and universal characteristics, but does not recognise an entrepreneurial leader’s role (Renko et al., 2015). More empirical research is needed to fully explore the influence of these traits (C. Harrison et al., 2018).

Following this same need to classify traits, Harrison et al. (2016) differentiate a behavioural and skills category. From the skills perspective, there is a shift from an approach in which characteristics are considered innate to the fact that they can be learned and developed. From the behavioural perspective (C. Harrison et al., 2018), scholars attempt to understand what

leaders actually do and the strategies they employ, and this approach moves from who one is (trait) to what one does (behaviour). In this approach, Antonakis and Autio (2007) propose a process model, albeit not empirically tested, where the context is a moderator of EL behaviours and where openness to experience and risk taking, among others, are the most important in the initial stage, but the need for power is the best predictor of success in the consolidation stage.

3. Why a gender perspective?

If we attempt to reach a census about leadership attributes in entrepreneurship, we find inherently masculine constructs (Clark et al., 2019) in which gender issues have rarely been acknowledged (R. Harrison et al., 2015). Hegemonic masculinity associates the successful entrepreneurial leader with rationality, competence and economic growth, and excludes women and other forms of masculinity (Dean & Ford, 2017; Nelson & Winter, 1974). Exploring and researching EL from new and different perspectives allow women’s EL experiences to be recognised as worthy of investigation in their own right (Henry et al., 2015; Megheirkouni, Thirlwall, & Megheirkouni, 2020). Researchers encourage the field to start moving away from focusing on dominant male discourse towards an in-depth understanding of gendered experiences using gender as an analytical category (Patterson, Mavin, & Turner, 2012) for it to truly progress through a framework of “doing gender well and doing it differently” (Mavin & Grandy, 2011) and to destabilise gender binary. One research question is posed in this research to shed some light on this gap: “what are women’s EL attributes in the literature?”.

METHODOLOGY

In Stage 1, an SLR of the main WoS database collection was conducted to search and select any publications related to EL attributes with a gender focus, see Figure 1. An SLR is a recognised method for providing “reliable knowledge from an evidence-based approach” (C. Harrison & Burnard, 2016), is well-established as appropriate methodological approaches in the entrepreneurship field (Pittaway & Cope, 2007) and is very useful when large volumes of evidence over long time periods are involved.

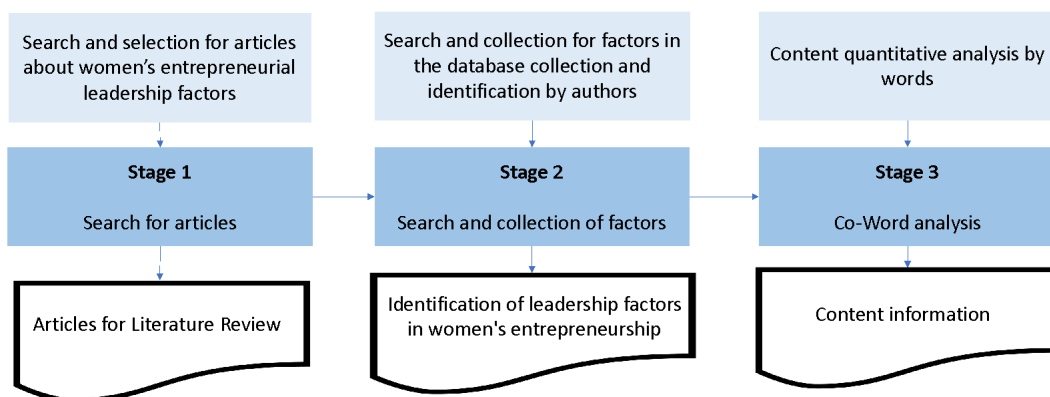


Figure 1. Content information methodology process

Source: the authors.

After obtaining the relevant bibliographic base, a review of each article was carried out to extract and identify women's leadership factors in entrepreneurship and to process data.

The SLR was inspired in the approach of Sanahuja and Ribes (2015) (Sanahuja Vélez & Ribes Giner, 2015), where seven decision steps are applied, see Figure 2. The first step was to consult the main WoS database collection. In a second step, appropriate search terms were defined using search equations Topic: ("leader*" and "entrepre*"), combined with the factors or skills by including all the relative terms: AND Topic: ("abilit*" or "capabilit*" or "attribut*" or "skill*" or "factor*" or "competenc*" or "behavior*" or "trait*" or "feature*"). The following filter was then added to obtain gender-focused results: AND Topic: ("female" or "gender" or "wom*" or "femin*").

A third step included a search that was refined by defining the time frame. The selected period went from 2000 to 2020 to analyse a long enough period to understand the evolution of the literature in this field. The fourth step involved refining by selecting only articles and reviews. Another filter, language, was included to choose the papers in English as a fifth step. As 28 articles had no publication date, a decision was made to always include the early access date as a preference in counts. The sixth step consisted in reading abstracts to find a response to the above question by obtaining truly relevant articles. To finish the seventh step, a hand search identified other articles by adding seminal articles.

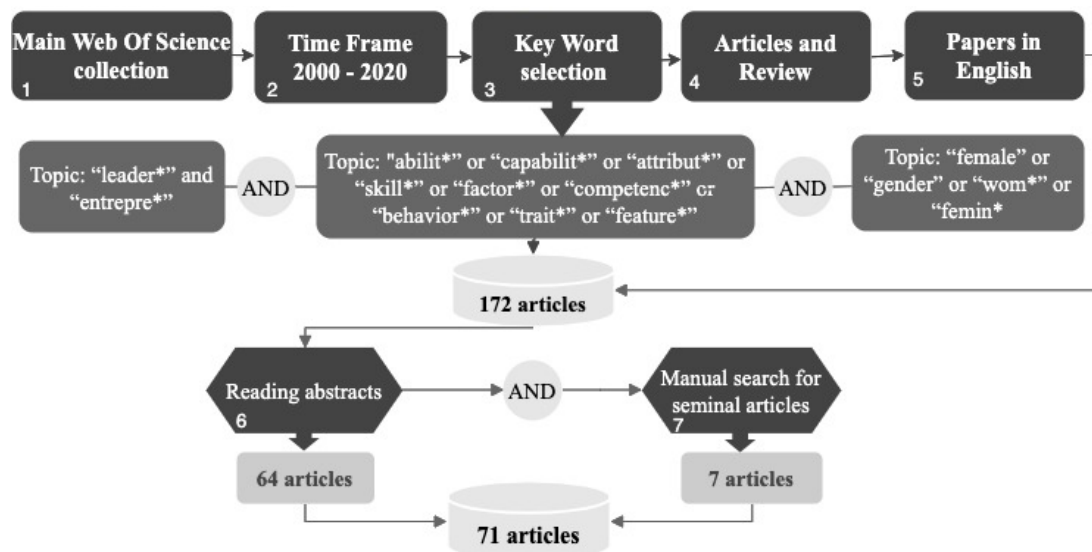


Figure 2. Steps applied to select articles (source: the authors).

Following a deductive procedure, Stage 2 consisted of data collection by thoroughly analysing all the articles obtained in Stage 1 to answer the research question "what are the factors of women's EL in the literature?". Seventy articles answered the question after obtaining many descriptors. All the factors identified and collected by SRL were organised according to their authors.

In Stage 3, an analysis and visualisation of emerging women's EL factors were performed with the free bibliometric analysis VOSviewer software (Guo et al., 2019). The analysis enables the

analysis of co-occurrences of keywords and the identification of the relations and interactions between the investigated topics to then map the strength of the associations between them in textual data, and to finally obtain the emerging research trends (Cantos-Mateos, Zulueta-García, Vargas-Quesada, & Chinchilla-Rodríguez, 2013).

RESULTS AND DISCUSSION

Stage 1: Identification of the studies with an SLR

The SLR methodology returned a final sample of 71 papers distributed as 69 articles and two reviews. The employed reference manager was the Mendeley software, which allowed the found documents to be stored and managed. Two decades of competences data were analysed, which were collated on an Excel master spreadsheet. VOSviewer was used to identify citations of authors, journals and articles.

Another SLR was found about EL factors, that of Harrison and Burnard (2016), but with no gender perspective. The comparison of sample sizes showed that their review included 82 articles *versus* the 71 papers in the present study. This is a consistent result given the relatively underdeveloped sphere of women's EL factors.

Stage 2: Factors search and collection

Seventy articles answered the question "What are women's EL attributes?". Each article was thoroughly reviewed to identify and collect women's EL factors. To advance in this research, understanding the term factors in a holistic sense was chosen by integrating all the dimensions that allow people's adequate performance, such as behaviour, personal attitudes, skills, knowledge, motivation, strategic and ethical issues, as well as the relevant experience needed to succeed (Sastre-Merino, Negrillo, & Hernández-Castellano, 2013).

After identifying terms, data were processed to homogenise the localised words (homogenise singular and plural, similar words, etc.). In all, 267 attributes were identified among women entrepreneurs (see Appendix 1), which indistinctly describe certain interrelated personal traits, behaviours, skills, abilities, values, expertise, insight, competences or knowledge that are often used interchangeably in the literature (Smith & Morse, 2015). This large number reflects the multiplicity of the concept, and emphasises the distinction made among individual, organisational or relational elements.

Stage 3: Co-word Analysis

In this study, and to analyse and visualise relations among the key factors from the occurrence data, the free bibliometric analysis VOSviewer software was applied with the same logic as that employed for authors' keywords (Van Eck & Waltman, 2010).

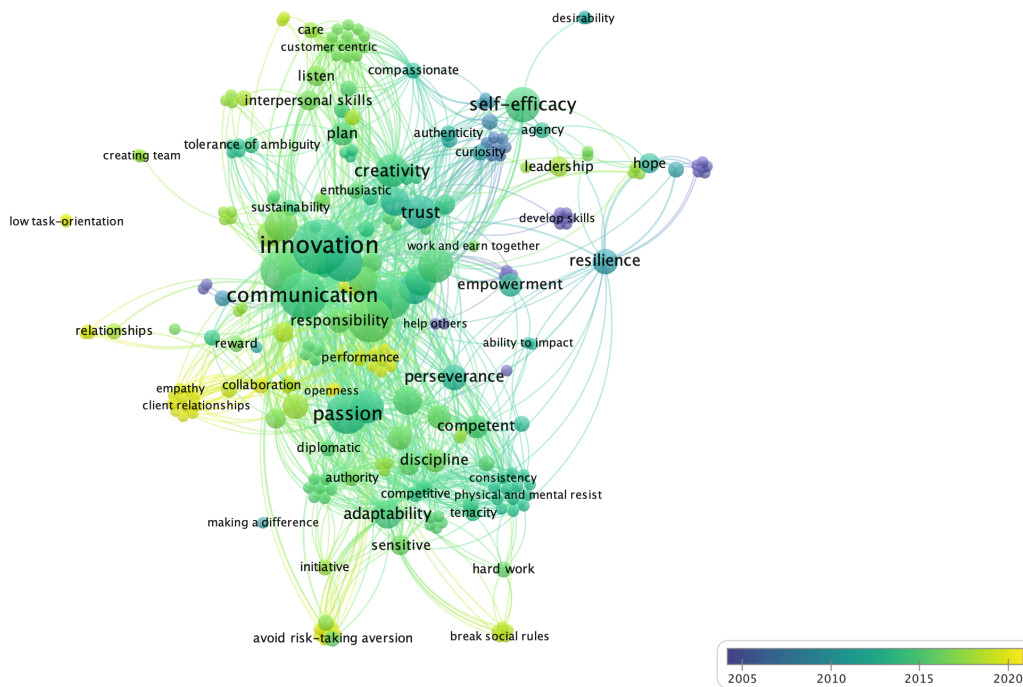


Figure 3: Co-factors overlay visualisation based on the occurrences and average publication per year scores.

Figure 3 depicts a visualisation of the overlapping leadership terms with their average year of publication. Colours were utilised to depict time-varying keyword occurrences. The dark purple terms were published around 2005 on average, in green are those with an average year of publication around 2015 and the factors in yellow have an average year of publication of about 2020. One interesting fact is that the terms evaluation, guidance, develop or identify skills, loyalty and provide advice come over as being items from 2003 on average. The factors making sense of complex environment, self-fulfilment, effectiveness, goal achievement, effectiveness, accountability, among others, are also from 2003 on average. Cognitive ability, learning agility, tolerance, receptive to feedback, self-reflection and responsive from Cluster 8 are descriptors from 2007 on average. Authenticity and humility (Cluster 3) and curiosity and desirability (Cluster 8) are from 2011 on average. Innovation, communication, passion, opportunity, self-confidence, respect, inspiration, empowerment and trust are media items from 2012/2013 on average. Influence, risk taking, self-efficacy, network, motivation, learning orientation and sacrifice are factors that appear in publications with an average year of publication of 2015. Need for achievement, proactivity, confidence, honesty, creating teams, connecting and relationships are from 2017 on average.

The most recent terms of leadership factors with an average of 2019/2020 are empathy, client relationships, openness, training, feel valued, transparency or collaboration (all from Cluster 5), team orientation, mentoring, inspiring (all from Cluster 9) and, finally, feeling oriented, control-minded and emotional energy (Cluster 12). Hence an evolution in the terms and their relations is observed, with new weak signals detected in factors like the importance of the balance between

personal and professional with the terms work life balance and flexible work, or with values like transparency or effective communication with body language.

It is interesting to show information on the total strength of the links (TLS) of the 20 most frequently repeated factors. Table 1 identifies the 20 most frequent keywords with their respective occurrences that appeared in the research database. In all, 267 terms appeared 538 times according to their citation frequency; that is, they occurred 538 times. Individually, the main identified words that were most frequently repeated were innovation, communication, network, passion, take risks, vision, opportunity, decision making, self-efficacy, trust, commitment, creativity, need for achievement, self-confidence, motivation, respect, organisation, adaptability, among others. Innovation stood out as the most repeated leadership attribute in entrepreneurship with an occurrence of 23, followed by communication and network.

Table 1. The commonest factors

No.	Keyword factors	Occurrences	Average Year of publication	No.	Keyword factors	Occurrences	Average Year of publication
1	innovation	23	2013.70	11	commitment	8	2013.50
2	communication	16	2014.19	12	creativity	8	2014.13
3	network	15	2015.67	13	need for achievement	8	2016.13
4	passion	13	2013.54	14	self-confidence	7	2012.43
5	take risks	13	2014.92	15	motivation	7	2014
6	vision	12	2014.33	16	respect	6	2012.50
7	opportunity	11	2012.73	17	organization	6	2014.83
8	decision making	9	2014.67	18	adaptability	6	2014.5
9	self-efficacy	9	2014.44	19	influence	6	2015.5
10	trust	8	2012	20	perseverance	5	2012.4

Source: VOSviewer

When comparing the attributes in the female literature to those identified in background, the most frequent ones coincided. Only the network attribute, the third most frequent for women, was not relevant in the generic literature.



Figure 4: Factors visualisation based on the occurrences, TLS and average publication per year scores.

Figure 4 shows how the factors with the highest occurrence (the largest circles) and the highest TLS have an average year of publication around 2013 and 2014. However, network stands out with a TLS of 149 and a high occurrence, with an average year of publication of about 2015/2016. Finally, need for achievement stands out as the most recent factor of the 20 most frequently repeated factors published an average around 2016.

Finally, the most recent factors that were published around 2019 and 2020 on average are shown in Table 2. Openness and personal relations are the most recent EL factors.

DISCUSSION AND CONCLUSION

The aim of this study is to not only contribute to the field of research into EL factors from a gender perspective because gender issues are rarely acknowledged (R. Harrison et al., 2015), but to also provide a more diverse and holistic approach by identifying and mapping women's EL attributes.

The comprehensive review of the 71 articles identified 267 entrepreneurial leadership attributes from a female perspective. The individual analysis of attributes showed that the most repeated identified words were innovation, communication, network, passion, take risks, vision, opportunity, decision making and self-efficacy, trust, commitment, creativity, need for achievement, among others. When comparing the attributes in the female literature to those identified in the background, the most frequent ones coincided. Moreover, the network attribute, which appeared more frequently with a female gender prism, was not relevant in the generic literature of the most relevant authors. A similar study should be conducted with a male gender focus and a comparison could be made.

Finally, it is interesting to underline the temporal evolution of leadership factors among women entrepreneurs. In the latest trends we find an evolution in the terms and their relations by detecting new signals, such as the importance of work-life balance today, flexible work or ethical values like transparency or effective communication, or openness and personal relations by highlighting emotional intelligence over other elements.

We did not find any factor that was universally endorsed as being effective and guaranteeing growth or success in entrepreneurship or universally rejected as ineffective (Gupta et al., 2004). The SRL papers highlight the importance of context and the strong impact of both culture and the family environment, which can condition many businesses and sectors chosen by women. It also emphasises the importance of country contextual variables for entrepreneurship and the need to employ a gender perspective when studying nascent entrepreneurship (Gimenez-Jimenez, Edelman, Dawson, & Calabrò, 2020).

The evidence obtained from the SLR suggests that EL is an important factor for developing a venture or corporation. It also reveals that EL and its factors are a comparatively new research area, and more so from a gender perspective. However, evidence for the inclusions of many of these attributes was not clear. What did clearly come over from the review was that more research is required to authenticate not only the different assumptions made by academics, but also the influence that the identified factors could have.

This current predominantly descriptive research emphasises the importance of moving towards studies that make an effort to integrate research into conceptual frameworks (Henry et al., 2015).

A first direction would be to move from a descriptive quantitative approach to a qualitative approach by regrouping descriptors to obtain categories and to allow a first approximation to a conceptual framework.

At a more exploratory level, another research direction is to understand how EL attributes are developed because, despite the critical role that EL competencies play in improving individual, group and new venture performances (Bagheri & Pihie, 2010), not many works have focused on their development during the entrepreneurship process.

The SLR highlighted some questions that would benefit from future research. For example, do all the female EL attributes proposed in this research lie in every context? What leadership attributes are the most influential on the growth of women's entrepreneurship? As a result, future work is necessary to obtain a general conceptual framework within which to organise and validate attributes descriptively with a view to devise entrepreneurship training programmes for women to develop their leadership to gain a growing feminine entrepreneurial venture.

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CHAPTER V. HOW LEADERSHIP FACTORS IMPACT DIFFERENT ENTREPRENEURSHIP PHASES: AN ANALYSIS WITH PLS-SEM

Article 4

How leadership factors impact different entrepreneurship
phases: an analysis with PLS-SEM.

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How leadership factors impact different entrepreneurship phases: an analysis with PLS-SEM

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ABSTRACT

This research work empirically contributes to the entrepreneurial leadership field by analysing how certain combinations of leadership factors impact entrepreneurship in both its launch and consolidation phases. Two relational models are proposed to study whether entrepreneurial leadership factors are positively related to different entrepreneurial activity process stages. The first analyses the effect on the venture's launch and start-up phases, and the second examines the impact on the entrepreneurship consolidation stage. Utilising data from 50 countries of the Global Entrepreneurship Monitor, a quantitative partial least squares structural equation method was employed to validate the proposed models. The main conclusion was that the use of some leadership capabilities has an unequal influence on entrepreneurship during its life cycle. This study contributes to the field in two ways: we firstly show that leadership factors are contextual, and their contribution depends on the stage of the entrepreneurial process in which the activity is located; secondly, this research reveals that the development of leadership factors, such as self-efficacy, networking, vision and innovative behaviour, positively condition the start-up and launch phases of entrepreneurial activity. The outcomes of this research demonstrate significant theoretical and empirical implications by bridging the existing gaps in the niche of entrepreneurial leadership factors.

Keywords: entrepreneurial leadership, entrepreneurial leadership factors, PLS SEM, entrepreneurship, new firms' growth, entrepreneurship life cycle.

JEL Classification: M13, L26

INTRODUCTION

Leadership has been identified in several research studies as one of the most significant organisational elements to condition entrepreneurial activity (Ensley, Pearce, & Hmieleski, 2006). For new ventures to succeed, leaders need certain competencies, skills or factors defined as specific leadership capabilities (Cogliser & Brigham, 2004; Fernald, Solomon, & Tarabishy, 2005; Gupta, MacMillan, & Surie, 2004). However, scholars have encountered several difficulties in studying these leadership factors in entrepreneurship. For a long time, leadership and entrepreneurship have been considered separate constructs, which makes it difficult to identify them. Later some authors identified these two domains as areas of "conceptual overlap" by locating some common factors, such as vision, planning, creativity and innovation, influence, and dispositional and cognitive approaches at this intersection (Cogliser & Brigham, 2004). Subsequently, this parallelism evolved into the "new paradigm" of entrepreneurial leadership (EL),

which established a similar set of common characteristics for leaders and entrepreneurs (Fernald et al., 2005).

EL is, thus, a relatively recent embryonic construct with its own identity (Aparisi-Torrijo & Ribes-Giner, 2022), that benefits from the mutual cross-fertilisation of the two leadership and entrepreneurship domains (Simba & Thai, 2019). Its contribution is recognised as an important factor in the success or failure of both small- and medium-sized enterprises (C. Harrison, Burnard, & Paul, 2018; Leitch & Harrison, 2018; Leitch, McMullan, & Harrison, 2013; Renko, El Tarabishy, Carsrud, & Brännback, 2015; Simba & Thai, 2019) and large corporations (Kuratko, 2007). EL emerges to respond to the possibilities and difficulties of entrepreneurial situations and to be able to overcome them (Fernald et al., 2005).

However, this new construct not only has an unclear definition (Leitch & Harrison, 2018), but it also lacks a conceptual and theoretical framework (R. Harrison, Leitch, & Mcadam, 2015). Different definitions often focus on entrepreneurial leaders' traits, characteristics and behaviours (R. Harrison et al., 2015), and do not pay much attention to the entrepreneurship context (Antonakis & Autio, 2007; Vecchio, 2003). For Antonakis and Autio (2007), this context should be considered an important moderator of leader effectiveness. The construct refers to leadership characteristics for various entrepreneurial conditions and contexts (Currie, Humphreys, Ucbasaran, & Mcmanus, 2008; Gupta et al., 2004) to understand entrepreneurship as an evolutionary process in which certain factors impact different entrepreneurial life cycle stages (Antonakis & Autio, 2007; Vecchio, 2003). Therefore, it is important to identify and better understand which factors or leadership skills are considered the most valuable ones to overcome the challenges of entrepreneurship in its conception, start-up, growth or consolidation phases.

If the truth were to be told, insufficient research has been conducted to better understand which leadership factors are considered the most important ones according to the entrepreneurial process stage, and whether they evolve or are culturally contingent or universal (Gupta et al., 2004). No real consensus on these characteristics has yet been reached (C. Harrison & Burnard, 2016) and adequate tools that measure leaders' entrepreneurial attributes are lacking (Leitch & Volery, 2017; Renko et al., 2015). To date, knowledge on what the identified attributes are, at what point in the entrepreneurial process they manifest themselves, whether they can be learned or exercised, and how they can help entrepreneurs to overcome challenges, is insufficient (C. Harrison et al., 2018; Kempster & Cope, 2010).

The purpose of this study is to address this critical gap. We aim to provide more information in this field by exploring how these leadership attributes impact entrepreneurial activity: on the one hand, in its start-up and launch stages and, on the other hand, in its consolidation stage. To this end, an empirical study is carried out with two relational models to validate several causal hypotheses on the combination of some leadership factors and to understand their impact on different entrepreneurial cycle stages by means of partial least squares structural equation modelling (PLS-SEM). In today's entrepreneurship research, PLS-SEM is increasingly used to perform an emerging confirmatory composite analysis (Manley, Hair, Williams, & McDowell, 2021). Our research is based on Global 2019-2020 Entrepreneurship Monitor data, which were

collected from 50 nations around the world (GEM) (Bosma et al., 2020). The SmartPLS programme allowed us to investigate the overall model fit, construct reliability, and the convergent and discriminant validity of the suggested measurement models to validate the hypotheses.

With this research, we are able to explain how some different leadership factors influence birth and start-up processes, which considerably contribute to the understanding of the field and its empirical advancement. Scholars in the field can advance with the contextual approach, policy makers can make better informed decisions, and economic agents engaged in entrepreneurial activities or investing, and entrepreneurs themselves, can better understand some drivers of entrepreneurial development and growth.

This article is organised as follows. Section 1 presents the hypotheses supported by the theoretical underpinnings of this research. The methodology employed and the data are described in Section 2. Section 3 presents and discusses the obtained results. The last section concludes the article with some final reflections.

1. THEORETICAL FRAMEWORK AND RESEARCH HYPOTHESES

In order to understand the field under study, this section theoretically explores the EL construct and the factors that are used to build theoretical models, which are discussed and confirmed in other sections.

1.1. Entrepreneurial leadership construct

EL has recently attracted conceptual attention by evidencing that the outcome of this construct can be the creation of a new venture, the production of a new product or service, or the overall development of an organisation (Kapil & Salgotra, 2018), by creating a group of participants "committed by vision to the discovery and exploitation of strategic value creation" (Gupta et al., 2004). It is, therefore, important to understand the leadership factors that are considered important for an organisation's success (R. Harrison et al., 2015). However, scholars often do not offer explanations about the importance of these characteristics, or at least not analytically. Neither do they highlight commonalities between entrepreneurs and leaders nor suggest how to leverage common characteristics or to establish models with a potentially predictive value (Roomi & Harrison, 2011).

Following a literature review of the factors that form the EL construct, we find a wide variety of drivers of entrepreneurship, but no conceptual framework to capture, organise or analyse them (C. Harrison et al., 2018). However, some more recurrent factors are identified, such as vision (Gupta et al., 2004; Ruvio, Rosenblatt, & Hertz-Lazarowitz, 2010), perceived opportunities (Arenius & Minniti, 2005; Koellinger, Minniti, & Schade, 2005; Renko et al., 2015; Shane & Venkataraman, 2000), self-efficacy (Bandura, 1977; Baum & Locke, 2004; Klyver & Schenkel, 2013; Travis & Freeman, 2017), relationships with other entrepreneurs or the environment (Arenius & Minniti, 2005; Davidsson & Honig, 2003; Klyver & Schenkel, 2013; Pirolo & Presutti, 2010) and innovativeness (Becherer, Mendenhall, & Eickhoff, 2008; Coglisier & Brigham, 2004;

Fernald et al., 2005; C. Harrison et al., 2018; Vecchio, 2003). Some of the factors that shape EL are explored below.

Vision is the image of a "desired future" for an organisation (Ruvio et al., 2010). Entrepreneurs' tough journey towards the creation of new ventures is guided by their vision (Baum & Locke, 2004). This factor may be present in the incubation and conception venture cycle phases as entrepreneurs envision a mental image of what the venture should look like at the start by constituting a roadmap to reach the goal (Ruvio et al., 2010). After leaders visualise that vision, they promote a proactive transformation of the firm's operations as a whole (Venkataraman & Van De Ven, 1998). In subsequent cycle phases, the effective communication of the vision is also important to foster entrepreneurial action (Gupta et al., 2004). Furthermore, innovation is a continuous process that refers to organisations' ability to create and develop new ideas, and to transform them into "processes, products and services" (Sawaeen & Ali, 2020). Innovation is, therefore, a sequential process that begins by detecting a problem or discovering an idea or solution, followed by a phase of creating, reflecting on and solving the problem, or creating the new product or service to launch it to the market (Sawaeen & Ali, 2020), which can be present throughout the entire entrepreneurial process. Innovation is a construct of several dimensions, including innovativeness. Innovativeness can be perceived by a team towards a leader. Entrepreneurial leaders can directly condition team participants to be creative and innovative while they work on identified opportunities to generate value for their organization (Chen, 2007). It involves the ability to generate new knowledge or to combine existing knowledge in a novel way to form an innovative idea (Jansen, Vera, & Crossan, 2009). Another major factor is perceived opportunities. One of the entrepreneurial goals is to recognise and take advantage of opportunities (Shane & Venkataraman, 2000). Being aware of untapped entrepreneurial prospects is, according to Kirzner (1979), a basic perceptual quality of entrepreneurial behaviour and an essential precursor of entrepreneurial activity (Kirzner, 1979). Empirical research has shown that being alert to good entrepreneurial opportunities is an important driver of individuals' entrepreneurial efforts (Arenius & Minniti, 2005; Koellinger et al., 2005). Several authors indicate that perceived self-efficacy positively conditions the entrepreneurial intention (Travis & Freeman, 2017). When individuals believe in their ability to complete tasks (Bandura 1986) and perform actions to produce results with a given output (Bandura, 1977), they feel that they have the necessary knowledge and skills to positively contribute to the decision to enter the process of creating new ventures (Klyver & Schenkel, 2013). In addition, people with high self-efficacy levels anticipate potential obstacles by showing excellent strategic flexibility and good ability to manage the environment (Bandura, 1977). So self-efficacy is recognised as a reliable predictor of new venture launching and growth (Baum & Locke, 2004; Becherer et al., 2008). Finally, social networks are of vital importance to identify entrepreneurial possibilities (Davidsson & Honig, 2003). Social interactions and networks have a beneficial impact on entrepreneurial performance (Liao & Welsch, 2005). People who have close relatives with their own businesses (Davidsson & Honig, 2003), or who personally know an entrepreneur (Arenius & Minniti, 2005), are more likely to start their own business.

To conclude, the EL construct is measured in this study with the dimensions of vision, innovative behaviour, opportunity perception, self-efficacy and networking.

2.2. Entrepreneurial process and hypotheses

As previously discussed, context is an important factor to explain the evolution of leadership in entrepreneurship (Antonakis & Autio, 2007; Gardner, Cogliser, Davis, & Dickens, 2011). An organisation's specific context can be described by, for example, the life process of entrepreneurial activity in which different leadership factors manifest themselves depending on the stage it is in (Antonakis & Autio, 2007; Vecchio, 2003). The configuration of the venture and its development are significantly impacted by founders, their behaviour and their leadership capacity (Cabrera & Mauricio, 2017; Kempster & Cope, 2010). As leadership is considered an important driver of venture growth, it is critical to identify the factors of this construct in early entrepreneurship stages (Zaech & Baldegger, 2017). However, such studies are scarce in both theoretically and empirically terms (Zaech & Baldegger, 2017). Therefore, we propose studying these specific EL factors in different life cycle stages in new ventures (Gartner, Bird, & Srarr, 1992; Parker, 2011) to provide a valuable contribution.

Several stages in entrepreneurship are commonly identified in the literature, and three major stages of the entrepreneurial cycle are generally identified: prelaunch; launch or nascent; post-launch or maturity phases (Baron, 2002; Reynolds & White, 1997). As Kesidou and Carter (2018) argue, entrepreneurs' behaviours are expected to differ in early entrepreneurial process stages from those observed when the firm is in a mature cycle stage (Kesidou & Carter, 2018).

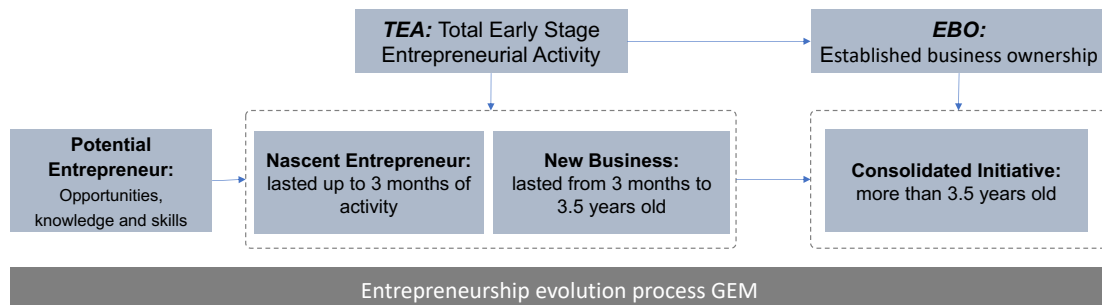


Figure 1. The entrepreneurship process (source: GEM)

With this research, we propose studying the factors that form the EL construct by investigating the launch stage, which we call early stage, and the maturity stage of the cycle, which we call the consolidation phase following the indications of the GEM (see Figure 1).

Start-up or nascent phase

EL is considered one of the most important organisational elements in conditioning the launch of a new venture (Ensley et al., 2006). According to Baum and Locke (2004), entrepreneurs' arduous journey towards the creation of new ventures is guided by their vision, which reflects an imagined desired future. Therefore, this factor is considered one of the most important ones in the initial phase (Gupta et al., 2004). In this early stage, entrepreneurs have certain skills for

creating a new business, such as the ability to recognise the opportunities they are presented with, and the networks that encourage them to push the venture forward and obtain both the resources and emotional support that they need (Wasdani & Mathew, 2014). Likewise, self-efficacy also plays an important role because, according to Chen 1998, the underlying cause of all the above-cited behaviours is individuals' self-efficacy. Belief in skills is even more important than possessing them or any past experience (Bandura 1986). Finally, innovativeness generates new knowledge or products in the team in the initial phase (Chen, 2007) as leaders with an innovative mindset are able to lead rapid change (Kesidou & Carter, 2018). Following these statements, the first hypothesis we put forward arises:

H1. EL factors are positively related to the launching or nascent phase of entrepreneurship.

Post-launch or maturity phase

In the maturity stage, entrepreneurs also require leadership factors to stabilise and develop their business. As they already have enough experience in the start-up process, their networking is chosen and consolidated (Wasdani & Mathew, 2014). Kesidou and Carter (2018) identify that it is in mature stages when innovative behaviours are present and entrepreneurial leaders focus on communicating the vision. Self-efficacy can also remain present in more advanced stages as entrepreneurs overcome challenges, which increases their confidence in their skills and competencies (Becherer et al., 2008). Entrepreneurs' ability to recognise and exploit market opportunities remains important (Shane & Venkataraman, 2000) because they continue to be exploited to realise them in more established stages (Arenius & Minniti, 2005). For these reasons the second hypothesis is put forward.

H2. EL factors are positively related to the consolidation phase of entrepreneurship.

Based on these theoretical foundations, we establish two conceptual research models with EL as the unobservable theoretical construct and leadership factors as the exogenous variables. Figure 2 analyses how these EL factors impact the endogenous conceptual variable, which is the conception and launch phases of the new venture. Figure 3 investigates the impact they have on the venture in its consolidation phase.

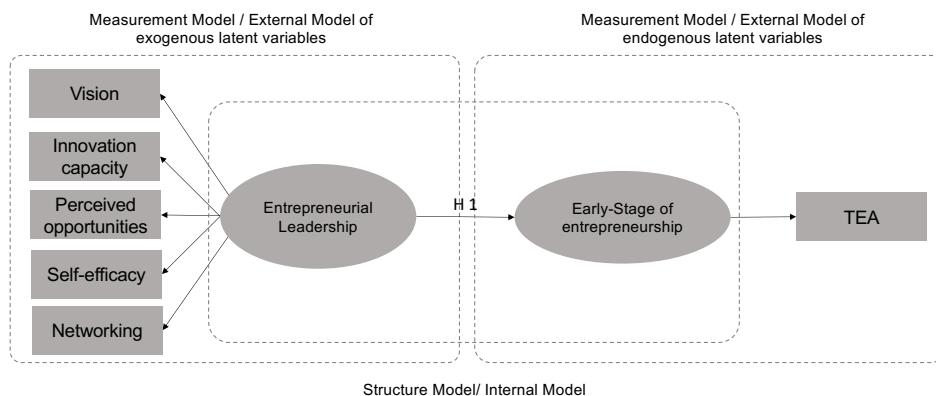


Figure 2. Proposed early stage of the entrepreneurship research model (source: the authors, 2021)

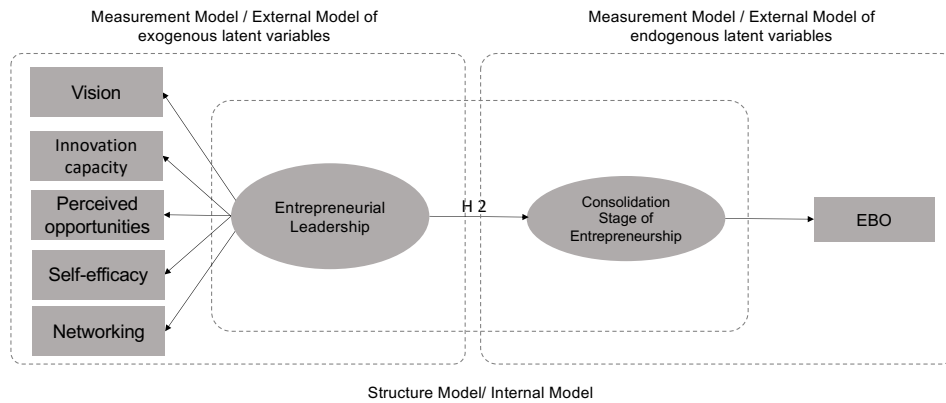


Figure 3. Proposed consolidation stage of the entrepreneurship research model (source: the authors, 2021)

3. RESEARCH METHODOLOGY AND DATA

3.1. Data collection, sample and measures

The used data come from the Adult Population Survey (APS) collected in the GEM's Global Entrepreneurship Monitor 2019/2020 Global Report, which is the largest annual survey on entrepreneurship to provide data on entrepreneurship patterns and trends in the studied economies (Singer et al., 2015). The APS collects individual data with a standardised survey instrument that is administered to representative samples of at least 2,000 adults from adult populations in each participating country at different economic and social development levels. For the present research work, APS survey data were collected from men and women aged 18-64 in 50 countries around the world to incorporate different socio-economic contexts (See Table 1).

Table 1. GEM Sample Profile of the 50 countries (source: GEM)

Year of Data Collection	2019/2020
Low-income countries	India (Central and East Asia)
	Egypt, Madagascar, Morocco (Middle East and Africa)
Middle-income countries	Pakistan (Central and East Asia)
	Russian Federation, Belarus, North Macedonia (Europe and North America)
	Brazil, Colombia, Ecuador, Guatemala, Mexico, Puerto Rico (Latin America and Caribbean)
High-income countries	Armenia, Iran, Jordan, South Africa (Middle East and Africa)
	China, Japan, Republic of Korea, Taiwan (Central and East Asia)
	Canada, Croatia, Cyprus, Germany, Greece, Ireland, Italy, Latvia, Luxembourg, Netherlands, Norway, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, United Kingdom, United States of America (Europe and North America)
	Chile, Panama (Latin America and Caribbean)
	Australia, Israel, Oman, Qatar, Saudi Arabia, United Arab Emirates (Middle East and Africa)

Sample characteristics	Representation of women adult population workers, no workers, entrepreneurs with or without income (18-64 years old)
Education	Primary and Secondary School and Higher Education

GEM data were also used to identify exogenous latent explanatory variables. The variable "Vision" in this research can be formulated as a long-term perception that guides the planned behaviour of an organisation by the entrepreneur who is going to set its strategy and formulate its goals (Ruvio et al., 2010). We adopt the GEM variable "Decision with long-term career plan", which is the percentage of the population aged 18-64 who agree that every decision they make forms part of their long-term career plan.

For perceived innovation behaviour, we use the GEM variable "Highly innovative by others", which measures the percentage of adults aged 18-64 who agree that others think that they are extremely innovative. This variable is referred to as "Innovativeness" in the remainder of this paper.

In terms of perceived entrepreneurial opportunities, the variable "Perceived opportunities" is taken as the percentage of the population aged 18-64 who agree that they see good opportunities to start a business in the area where they live.

Entrepreneurial self-efficacy, taken in this study as perceived entrepreneurial skills, knowledge and experience, is "Perceived capabilities" in GEM. It is the percentage of the population aged 18-64 who agree that they have the necessary knowledge, skills and experience to start a business. This variable is referred to as "Self-Efficacy" in the rest of this paper.

Finally for the GEM "Networking", we also take the variable "Personally know an entrepreneur", which is the percentage of the population aged 18-64 who personally know someone who has started a business in the last 2 years.

The endogenous indicator Total Early Stage (TEA) of the GEM is taken for the early stage when a business is less than 42 months old, and is known as the nascent and new venture phase. The late stage, when the venture is older than 42 months and is known as the consolidated venture stage, is the GEM endogenous Established Business Ownership (EBO) indicator.

The preliminary data analysis is used to address issues like missing values, outliers and data non-normality.

3.2. Use of SEM PLS for the statistical analysis

Structural equation modelling (SEM) is used to perform the two analyses of both models (see Figures 2 and 3). This second-generation statistical methodology allows a highly efficient multivariate analysis to be carried out by simultaneously examining a series of dependence relations between independent and dependent variables. It uses both factor analysis and linear regression models to test predictive or causal hypotheses in the behavioural sciences, management and social sciences fields (Moya-Clemente, Ribes-Giner, & Pantoja-Díaz, 2020; Williams, Vandenberg, & Edwards, 2009).

By this analytical approach, it is possible to investigate the links between the latent variables (unobservable variables) that represent the concepts of the theory and the data obtained with

indicators (Williams et al. 2009). With the SEM method, the PLS technique is used. PLS is employed mainly for explanatory, confirmatory, exploratory, descriptive and predictive purposes (Benitez, Henseler, Castillo, & Schuberth, 2020; Chin et al., 2020), based on an analysis of variance towards more flexible modelling (Hair, Hult, et al., 2017). PLS-SEM is a very useful tool in the toolbox of social science scholars with recent articles in family business, entrepreneurship and human resources (Hair, Sarstedt, Ringle, & Mena, 2012; Manley et al., 2021), which have pointed out the value of an analytical method that assesses both explanation and prediction in testing theoretical models (Criado-Gomis, Iniesta-Bonillo, & Cervera-Taulet, 2018; Hair, 2021).

The main aspects of this approach are that it does not require any uniformity of variable metrics and can estimate models with small samples, as long as they are representative of a population, without forgetting basic statistical rules (Petter & Hadavi, 2021). The SmartPLS 3.3.3 software is utilised, which is one of the leading software packages for PLS based structural equation modelling (Ringle, Wende, & Becker, 2015). It is based on an iterative algorithm that derives the weights used to construct the linear combinations of observed indicators as proxies for all model constructs (Müller, Schuberth, & Henseler, 2018). This research follows the steps proposed by Henseler et al. (2016) (Henseler, Hubona, & Ray, 2016).

Firstly, a nomological network construction is performed, where the construct (EL factors) is included with the involved variables (vision, innovativeness, perceived opportunities, self-efficacy, network). Both the structural model (internal model in PLS-SEM), and the relations (paths) between the indicators and the construct in the measurement model, are explicitly represented by the nomogram (external model).

Secondly, the overall model evaluation is carried out by including a model fit test and the possibility of determining whether data are compatible with a factor model (see Section 3.3).

Thirdly, both the validity and reliability of the measurement model are assessed. The measurement model aims to determine whether the observable variables accurately measure theoretical ideas. Subsection 3.4 expands on this analysis.

Finally, a structural model evaluation is carried out to see if the hypotheses are validated. The significance and magnitude of the relations between the different variables are assessed (see Subsection 3.5).

3.3. Global model fit assessment

One of the first steps in PLS-SEM methodologies is the overall model fit (Moya-Clemente et al., 2020) because it indicates whether the underlying theory is reflected in the data (Henseler et al., 2016). The estimated and saturated models are compared to obtain evidence as to whether the estimated model fits the collected data. The model fit test uses bootstrap-based tests to include the fit indices and inferential statistics for the estimated models (Henseler et al., 2016). The applied model fit criterion is the standardised root mean square residual (SRMR), where a threshold below 0.08 is usually considered a good fit (Hu & Bentler, 1998). The bootstrap-based inference statistics of geodesic discrepancy (dG), unweighted least squares (dULS) and SRMR are bootstrap-based tests of overall model fits (Henseler et al., 2016), that have to be $\geq HI95 \geq$

HI99, where failure to meet one of these indicators suggests that the model may not be accurate (Henseler, 2017).

3.4. Evaluation of measurement models

The measurement model is assessed by looking at the reliability and validity values provided by the relationships between the indicators and the constructs.

The two proposed models have reflective indicators because they "can be seen as a representative sample of the possible items available in the conceptual domain of the construct" (Sarstedt, Hair, Ringle, Thiele, & Gudergan, 2016). In reflective modalities, the most essential metrics used to assess the measurement model are reliability, convergent validity and discriminant validity (Hair, Hult, et al., 2017).

To firstly assess internal consistency, i.e., construct reliability, the following indicators are used, which must all be equal to or higher than 0.7: Cronbach's alpha (Hair, Hult, et al., 2017), composite reliability (ρ_c) (Ali, Rasoolimanesh, Sarstedt, Ringle, & Ryu, 2018) and Dijkstra Henseler's Rho_A (ρ_A) (Dijkstra & Schermelleh-Engel, 2014). To determine convergent validity, the external loading (λ) is used to determine the reliability of each measure and the average variance extracted (AVE), which should be ≥ 0.5 (Ali et al., 2018). The most widely accepted rule of thumb for each indicator λ is that proposed by Carmines and Zeller (1979), which states that it must be higher than or equal to 0.707 to be accepted as part of a construct (Carmines and Zeller, 1979). This means that the variance shared between the construct and its indicators is greater than the error variance. As loadings are correlations, a level that is equal to or higher than 0.707 implies that more than 50% of the observed variance is shared by the construct. The indicators that do not meet the above criteria can be removed by what is called "item purging". However, several researchers believe that this rule of thumb should not be so rigid in early scale development stages (Chin, 1998).

Finally, discriminant validity is examined using cross-loadings, which state that no item should load more on a concept than that which it is trying to measure (Hair, Hult, et al., 2017). The other two markers of discriminant validity are: the Fornell-Larcker criteria (\sqrt{AVE}), which must be higher than the correlation with other constructs (Fornell & Larcker, 1981): the Heterotrait-monotrait ratio (HTMT ≤ 0.9) (Henseler, Ringle, & Sarstedt, 2015).

3.5 Structural model assessment

In this phase, structural models are examined to see how well they predict the formulated hypotheses. Collinearity, sign and magnitude of the path coefficient, significance of the path coefficient, coefficients of determination and effect size are the key analyses followed to evaluate the structural model. The variance inflation factor ($VIF < 3$) (Ali et al., 2018) is used to test collinearity. To be considered significant, the standardised paths must take values above 0.20 (Ali et al., 2018), and the coefficient of determination R^2 must be between 0 and 1 for each construct to be acceptable (Hair, Hollingsworth, Randolph, & Chong, 2017). Effect sizes (f^2) between 0.02 and 0.15 are considered weak, those between 0.15 and 0.35 are believed moderate, and those above 0.35 indicate strong effects (Hair, Hult, et al., 2017).

4. RESULTS

After evaluating the global fit of the two models, the obtained main results were as follows.

4.1. The first model

The SRMR is < 0.08 , which indicates a good overall model fit. To assess the overall model fit, a bootstrap procedure is run and offer the data seen in Table 2. These data suggest that all the results of SRMR, dG, and dULS of the estimated model are below both percentiles: 95% (HI95) and 99% (HI99).

Table 2: Global model fit measures (source: the authors with PLS, 2021)

	Estimate Model			Saturated Model	
	Value	HI95	HI99	Value	
SRMR	0.087	0.092	0.124	SRMR	0.087
dULS	0.113	0.128	0.231	dULS	0.113
dG	0.077	0.098	0.169	dG	0.077

We secondly assess the measurement models. Investigating construct reliability (see Table 2) reveals that the two constructs have an adequate Cronbach's alpha above 0.7, with 0.833 and 1, composite reliability indicators (ρ_c) with good values above 0.7 for the two constructs. The Dijkstra-Henseler indicator also takes values above 0.7. Convergent validity assesses if the loadings of indicators "networking" ($\lambda = 0.58$) and "perceived opportunities" ($\lambda = 0.399$) are lower than 0.707. The "perceived opportunities" item was cleaned, and we decided to not remove "networking" from the model following the recommendation of Hair et al. (2017). In fact the reliability results were not affected (see Table 3).

Table 3. Results for the measurement models (source: the authors with PLS, 2021)

	Outer loadings 1 st model	Outer loadings 2 nd model	Cronbach 's alpha	rho_A	ρ_c	AVE
<i>Entrepreneurial Leadership (EL)</i>			0.847	0.891	0.899	0.697
Vision	0.864	0.860				
Innovation Capacity	0.915	0.914				
Self-efficacy	0.926	0.931				
Perceived Opportunities	0.399					
Networking	0.58	0.588				
<i>Early-stage entrepreneurship (ES)</i>			1	1	1	1

Convergent validity is confirmed for EL with an AVE above 0.5 (0.697). The variance described by the variables is greater than the variance explained by measurement error, which demonstrates that each set of indicators reflects an independent construct. Cross-loadings are used to check discriminant validity, and each item loads more on the construct that it is intended to assess (see Table 4). Convergent validity is confirmed using the Fornell-Larcker criterion and conformity with the Heterotrait-Monotrait (HTMT=0.40) connection, whose value is below 0.9. The square root of the AVE of each construct is higher than the association with the others. Confirmation of discriminant validity verifies the construct measures' reliability.

Table 4. Discriminant validity (source: the authors with PLS, 2021)

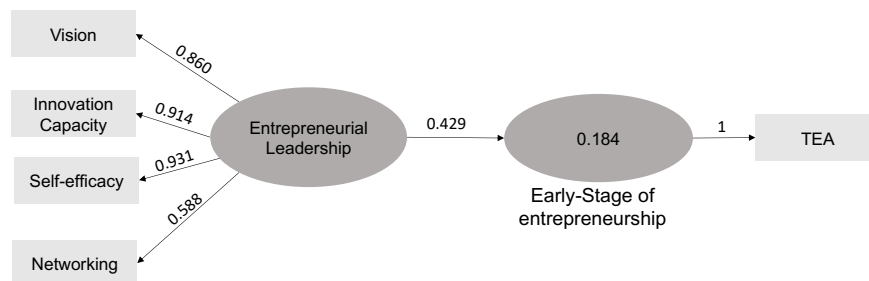
<i>Cross loadings</i>	<i>Entrepreneurial Leadership</i>	<i>Early-stage entrepreneurship</i>
Vision	0.860	0.420
Innovation Capacity	0.914	0.336
Self-efficacy	0.931	0.403
Networking	0.588	0.236
TEA	0.443	1

Finally, the structural model assessment shows the non-existence of multicollinearity in both relations because the VIF equals 1, and therefore >3. The standardised path takes a value above 0.20 (=0.429) (see Table 5) and is recognised as relevant. This means that these leadership factors influence the company's conception and start-up. The path coefficient is significant and positive (p-value=0 <0.05), which confirms the theoretical postulates of the hypothesis. The 5% and 95% confidence intervals (CI) also demonstrate restricted variability.

Table 5. Structural model: hypotheses test result (source: the authors with PLS, 2021)

Direct Effects	Path coefficient	t-Value	p-Value	f²	95% CI	Supported
EL → ES (R ² =0.184)	0.429	3.940	0.00	0.226	[0.266-0.619]	YES H1

The R2 of early-stage entrepreneurship is 0.184, which is considered a moderate value. It implies that the EL factors explain about 18% of the variance of launching and conception in entrepreneurship. The EL factors have a medium-large effect size on early-stage entrepreneurship (f2 = 0.226) according to the effect size analysis, which assesses changes in R2 terms (see Figure 4). Developing the leadership factors included in the EL construct can increase launching and new entrepreneurship by 18%.

**Figure 4. The first model results (source: the authors, 2021)**

4.2 The second model

For the second model, validity analyses detect that the loadings for indicators "networking" and "perception of opportunities" are below 0.707 (see Table 6). These indicators were removed from the model as neither rho_A nor AVE gave correct values. After removal and recalculation, both constructs had appropriate values.

Table 6. Composites and measures (source: the authors with PLS, 2021)

	Outer loadings 1st model	Outer loadings 2nd model	Cronbach's alpha	rho_A	pc	AVE
Entrepreneurial Leadership (EL)			0.904	0.928	0.925	0.805
Vision	0.959	0.949				
Innovation capacity	0.779	0.833				
Perceived Opportunities	0.19					

Self-efficacy	0.926	0.905				
Networking	0.19					
Consolidation stage of entrepreneurship (CE)			1	1	1	1

The global model fit is able to fit the data: SRMR=0.067 \geq 0.153 (HI95) \geq 0.417 (HI99), dULS=0.045 \geq 0.233 (HI95) \geq 1.738 (HI99) and dG=0.073 \geq 0.204 (HI95) \geq 0.616 (HI99).

For the measurement model assessment, the investigation of construct reliability reveals an adequate fit with Cronbach's alpha, ρ_c and Dijkstra-Henseler's ρ_A indicator. The Fornell-Larcker criteria and external loadings confirm convergent validity. The square root of the AVE of each construct is higher than the correlation between the other constructs, and the cross-loadings and the HTMT confirm constructs' discriminant validity.

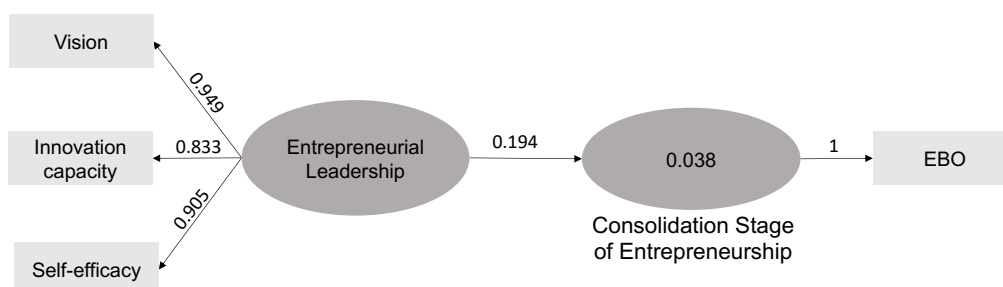


Figure 5. The second model results (source: the authors, 2021)

The structural model reveals that neither of the two relations shows multicollinearity (VIF=1). The path value = 0.194 (see Figure 5 and Table 7) is weak. This implies that leadership factors hardly condition the venture's consolidation phase. R2 is 0.038, which is a weak value and implies that leadership factors barely explain 3% of the variance in the venture's consolidation phase. The p-value=0.166 and a t-Value not $> \pm 1.96$ after bootstrapping invalidate Hypothesis 2. Therefore, the premise that the EL factors of vision, innovativeness and self-efficacy are associated with the consolidation phase is not supported by this model because they have no proven moderation.

Table 7. Structural model: hypotheses test result (source: the authors with PLS, 2021)

Direct Effects	Path coefficient	t-Value	p-Value	f ²	95% CI	Supported
EL → CE (R ² =0.038)	0.194	0.976	0.165	0.039	[-0.255-0.404]	NO H2

5. DISCUSSION

The aim of this study is to develop two relational models to demonstrate that leadership factors in entrepreneurship, such as vision, innovativeness, opportunity spotting, self-efficacy and networking, influence different entrepreneurial process stages. The first model investigates the impact of these factors on a venture's start-up and launch. The second model investigates how these factors influence the continuity of entrepreneurial activity. A model is built using the variance-based technique PLS-SEM to confirm the established hypotheses. GEM data from 50

countries around the world are employed for this research work. To describe the start-up and early stages of entrepreneurship, the endogenous indicator of TEA is taken. EBO is employed to describe the continuation stage. Both are provided by GEM.

The analysis of the first model validates the relations between the indicators of vision, innovativeness, self-efficacy and networking of the EL construct and the initiation and start-up phase of entrepreneurship as determined in the theoretical framework study. The proposed model has good predictive ability, reliable and valid measurements, and a close and significant relation between the constructs that validate Hypothesis 1. The results reveal a substantial positive association between the EL factors and the venture's initiation and start-up because this phase undergoes a total change of 18% due to EL. The significant and positive association between EL factors, such as vision, innovativeness, self-efficacy and networking, and venture conception and initiation, is consistent with several authors (Antonakis & Autio, 2007; Kesidou & Carter, 2018; Vecchio, 2003; Wasdani & Mathew, 2014). These results are logical because in early-stage entrepreneurship, if entrepreneurs know some entrepreneurs, are confident in capabilities, knowledge and skills, and are clear about the desired future of the business and maintain focus, they are seen by others as having the innovative capacity to launch and develop ideas or products (Antonakis & Autio, 2007; Baldegger & Gast, 2016; Kesidou & Carter, 2018; Ruvio et al., 2010; Wasdani & Mathew, 2014). A development of these leadership factors included in the EL construct could, according to our study, increase launching and new entrepreneurship by 18%. This is a very important finding because to date, the impact of some of these factors on nascent entrepreneurship has been theoretically or empirically tested separately, but no empirical studies have jointly and significantly supported the combination of several factors of the embryonic EL construct.

Despite the second model being feasible and reliable, it does not confirm Hypothesis 2. The moderation between the combination of factors and the consolidated stage in entrepreneurship is not tested. This is logical because if the impact of the above factors is important in early nascent stages, these same EL factors are probably not necessary when the firm is established and has been running for more than 3.5 years. This result coincides in some points with the work of Vecchio and Antonakis, who point out the importance of entrepreneurs' context and stage because it uses different skills, knowledge, traits and behaviours.

The implication of this research clearly shows that leadership factors in entrepreneurship are neither universal nor unchanging (Den Hartog et al., 1999; Gupta et al., 2004). We herein prove that, in each entrepreneurial life stage cycle, the EL construct factors have a different impact depending on the specific context. This responds to some authors' calls for lack of empirical studies in this regard (Zaech & Baldegger, 2017).

6. CONCLUSIONS

The aim of this paper is to contribute empirically to the EL field by analysing how certain combinations of leadership factors impact, on the one hand, the birth and launch stages of entrepreneurial activity and, on the other hand, the consolidation phase. The contribution to the current body of knowledge is very relevant because, on the one hand, it proves that the

combinations of certain attributes of EL do not have the same impact on different entrepreneurial activity phases. On the other hand, it shows how specific factors, such as vision, innovativeness, self-efficacy and networking, significantly impact the nascent and start-up phases of entrepreneurship.

One of the limitations of this study is the number of countries included in the study given the data available in the employed databases. Although this work covers all international geographical areas, it can be extended to more countries. Furthermore, this study could be developed in future research using more combinations of leadership factors because we observed that the R2 obtained coefficient is satisfactory, but could be higher if more EL markers are included.

As a future recommendation, it would be fascinating to analyse different years and to verify the model's robustness for these times. The introduction of a gender focus is highly recommended given the important differences in entrepreneurship between men and women in certain geographical areas. As base countries have different levels of socio-economic development, the same analysis could be carried out for countries with a similar development level, and interesting conclusions could be drawn. Furthermore, empirical models could be developed by choosing different EL variables according to the distinct entrepreneurship stages and by studying the level of impact in relation to each other. This is an avenue to explore that could help the EL field to considerably advance.

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CHAPTER VI. HOW DO LEADERSHIP FACTORS IMPACT DIFFERENT FEMALE ENTREPRENEURSHIP STAGES?

Article 5

How do leadership factors impact different female entrepreneurship stages?

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How do leadership factors impact different female entrepreneurship stages?

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ABSTRACT.

This research contributes conceptually and empirically to the female entrepreneurial leadership field. With two relational models, the objective is to analyse how certain combinations of leadership factors impact the different phases of women's entrepreneurship in its launch, start-up and consolidation phases. Using data from 43 countries from the 2020/21 Global Entrepreneurship Monitor's Women's Entrepreneurship, a quantitative partial least squares structural equation method was used to validate the proposed models. The main finding confirmed the positive and significant relation between some leadership capabilities in the early female entrepreneurship stage, but not in the consolidation stage. With this study, we make a double contribution to the field. We firstly demonstrate that the development of leadership factors like self-efficacy, perceived opportunities, the need for achievement, networking and networking in a COVID-19 context, will positively condition the early female entrepreneurship stage. Secondly, it reinforces the theory that leadership factors are contextual because they depend on women's entrepreneurial activity life cycle. This work confers the field more clarity by helping to clarify the gaps in the conceptual framework of women's entrepreneurial leadership factors.

Keywords: Female entrepreneurial leadership, entrepreneurial leadership factors, PLS-SEM, entrepreneurship, new firms' growth stages, entrepreneurship life cycle.

JEL Classification: M13, L26

INTRODUCTION

Leadership is a recognised driver of entrepreneurship (Felix, Aparicio, & Urbano, 2019), and numerous studies have attempted to address the necessary leadership factors for successful entrepreneurial activities (Cogliser & Brigham, 2004). Entrepreneurship and leadership have been traditionally separate or parallel thematic research fields (Cogliser & Brigham, 2004; Gupta, MacMillan, & Surie, 2004; Lippitt, 1987; Renko, El Tarabishy, Carsrud, & Brännback, 2015; Vecchio, 2003), which have converged in an intersection (Cogliser & Brigham, 2004; Renko et al., 2015) to create a "new paradigm" called entrepreneurial leadership (EL) (Fernald, Solomon, & Tarabishy, 2005). This embryonic construct, which benefits from the cross-fertilisation of both domains (Leitch & Harrison, 2018), has been recently recognised with its own identity. However, EL has not benefited from the gender advances in the entrepreneurship and leadership fields (R. Harrison, Leitch, & Mcadam, 2015).

The EL literature has not generated appropriate theoretical and conceptual frameworks that include gender analyses (R. Harrison et al., 2015). Furthermore, there is consistent evidence for

standard descriptions of entrepreneurial leader characteristics based on masculine norms and traits (Ahl, 2006; Calás, Smircich, & Bourne, 2009; Dean & Ford, 2017; Lewis, 2015; Patterson, Mavin, & Turner, 2012) to the extent that the entrepreneurial leader identity has a clear masculine bias (Marlow & McAdam, 2013). EL discourse tends to move towards subordination of all those who do not conform to that stereotype (Calás et al., 2009) by “essentially rendering invisible the gendered and sexual dimensions” (Henry, Foss, Fayolle, Walker, & Duffy, 2015). Exploring gender in the EL context allows us to look at the discipline from new and different perspectives by better acknowledging women’s experience (Carter, Marlow y Bennett 2012).

Moreover, insufficient research has been conducted to better understand which leadership factors are considered the most important depending on the entrepreneurial process stage, and whether they evolve or are culturally contingent or universal (Gupta et al., 2004). According to Antonakis and Autio (2007), the EL theory should consider context to be an important moderator of leader effectiveness, and yet research has historically analysed leader traits and demographics rather than what leaders do, and have paid little attention to the entrepreneurship context (Antonakis & Autio, 2007; Vecchio, 2003). In conclusion, knowledge to date on the identification of these attributes, at what point in the entrepreneurship lifecycle they are manifested, whether they can be learned or practiced, or to what extent they can help entrepreneurs to overcome challenges is insufficient (C. Harrison, Burnard, & Paul, 2018; Kempster & Cope, 2010), and more so with a gendered lens.

The purpose of our study is to address these two critical gaps. To address these needs to respond to the call of researchers like R. Harrison et al. (2015), and as exploration of gender in the leadership of female entrepreneurs is lacking, we aim to investigate whether particular leadership factors drive the growth of female entrepreneurship, what these possible combinations of factors are, and whether they manifest themselves in different entrepreneurial process stages.

With two relational models, this study explores the possible impact of certain combinations of leadership factors in the start-up, launch and consolidation stages from a gender perspective in a COVID-19 context. To this end, we propose conducting an empirical study of the two models to validate several causal hypotheses of the impact that some leadership factors of the female entrepreneurial leadership (FEL) construct has on the entrepreneurial life cycle using partial least squares structural equation modelling (PLS-SEM). In entrepreneurship research, the PLS-SEM methodology is increasingly used to conduct emergent confirmatory analyses (Manley, Hair, Williams, & McDowell, 2021). Our research was based on data from the 2020-2021 Global Entrepreneurship Monitor’s (GEM) “Women’s Entrepreneurship: Thriving Through Crisis” report (Elam et al., 2021). Data were collected from 43 countries around the world. The SmartPLS programme allowed us to investigate the overall model fit, construct reliability, and the convergent and discriminant validity, of the suggested measurement models to validate the structural model hypotheses.

With this research, we are able to shed light on some of the different leadership factors that impact women’s start-ups and start-up and consolidation processes by contributing considerably to the understanding of the field and its empirical advancement with a gender focus. This study

can benefit numerous stakeholders: Scholars from the field to advance the contextual approach to EL; academic organisations in entrepreneurship; policy makers to make better informed decisions; economic agents seeking to engage or invest in entrepreneurial activity; entrepreneurs themselves to better understand some drivers of growth.

This article is organised as follows. Section 1 sets out the theoretical underpinnings of this research. The methodology employed and the data are described in Section 2. Section 3 presents and discusses the results obtained with the SmartPLS software. The last section concludes the article with some final reflections.

2. ESTABLISHING A LINK BETWEEN FEL AND THE ENTREPRENEURIAL PROCESS. HYPOTHESES DEVELOPMENT.

The concept of the women's entrepreneurial leadership construct is explored by identifying some important factors that constitute it through a literature review, as are the different phases of the entrepreneurial life cycle in EL terms. With these theoretical constructs, the theoretical models that will be validated in the following sections are developed.

The FEL construct

In recent years, conceptual attention has been paid to EL and has resulting in an interesting body of knowledge, albeit one lacking development from a gender perspective (R. Harrison et al., 2015). This interest is partly due to the fact that leadership factors in entrepreneurship are considered important contributors to the success of organisations as both new ventures (Leitch, McMullan, & Harrison, 2013) and large existing corporations (Kuratko, 2007). For such entrepreneurial activities to be successful, specific leadership competencies, attributes or factors defined as specific leadership capabilities are required of leaders (Cogliser & Brigham, 2004; Fernald et al., 2005; Gupta et al., 2004).

Following a literature review on the factors making up the FEL construct, we find many largely unstructured characteristics (C. Harrison et al., 2018) without a consistent conceptual framework. However, some of the highly recurrent leadership factors in women entrepreneurs are the need for achievement (Botha, 2020; Li, Sun, Wang, & Ke, 2020; MCGowan, Cooper, Durkin, & O'Kane, 2015), perceived opportunities (Adom & Anambane, 2019; Ahmad, NH; Suseno, Y; Seet, PS; Susomrith, P; Rashid, 2018; Garrigos et al., 2020; Huq, Tan, & Venugopal, 2020), self-efficacy (Agarwal, Lenka, Singh, Agrawal, & Agrawal, 2020; Bodolica & Spraggon, 2015; Botha, 2020; Cater & Young, 2020; Cho, Han, Park, & Kang, 2020; Dixit, Agrawal, Agarwal, Gerguri-Rashiti, & Said, 2020; Hyun, Seo, & Choi, 2019), networking with other entrepreneurs or the environment (Bernardino & Freitas Santos, 2019; Bodolica & Spraggon, 2015; Dixit et al., 2020; Fischer, 2019; Huq et al., 2020; Krakauer, de Moraes, Coda, & Berne, 2018; Mueller, 2018).

The need for achievement is one of the leadership factors that is a driver of entrepreneurship. It is manifested throughout the entrepreneurial process with a demonstrated positive correlation with entrepreneurial success (Botha, 2020; Fuad & Manaf Bohari, 201). Entrepreneurs are active decision makers because they tend to set goals (Becherer, Mendenhall, & Eickhoff, 2008) and face numerous challenges inherent to entrepreneurial activity (Jo & Lee, 1996) that improve their

performance. Another of the main activating factors of entrepreneurial activity in its initial phase is the entrepreneur's ability to recognise, make the most of opportunities (Shane & Venkataraman, 2000) and exploit them to turn them into reality (Arenius & Minniti, 2005). The self-efficacy factor favourably conditions the entrepreneurial intention (Travis & Freeman, 2017; Zhao, Hills, & Seibert, 2005) because if entrepreneurs believe in their own capabilities, skills and competencies to organise, perform actions and complete tasks with a certain level of performance (Bandura, 1977; Shane, Locke, & Collins, 2003), then they can decide to enter the process of creating new ventures (Klyver & Schenkel, 2013). Thus self-efficacy is recognised as a strong predictor of both new venture start-ups and actual growth (Baum & Locke, 2004; Becherer et al., 2008). Finally, according to research social networks are extremely important for identifying entrepreneurial possibilities in early entrepreneurship stages (Davidsson & Honig, 2003), and also for acquiring resources during entrepreneurship (Chotigeat, Balsemeier, & Stanley, 1991). Research argues that social interactions and networks have a beneficial impact on women's entrepreneurial performance (Huq 2020), and even on social entrepreneurship (Bernardino & Freitas Santos, 2019). Women with close relatives who own businesses (Davidsson & Honig, 2003; Huq 2020) or who personally know an entrepreneur (Arenius & Minniti, 2005; Koellinger et al., 2005) seem more likely to start their own business. Research also reveals that network formation is highly context-dependent because its structure is influenced by the social organisation's characteristics and by its leaders' demographic and organisational situation (Bernardino & Freitas Santos, 2019). Therefore, apart from including the networking factor, this research work is also contemplated in a pandemic context to understand whether or not it influences different entrepreneurship phases.

In conclusion, the conceptualisation of the EL construct is measured in this study using the dimensions of achievement orientation, perceived opportunity, self-efficacy and networking in different contexts like a pandemic.

Entrepreneurial process

According to scholars, any leadership situation involves three aspects: the leader, the follower and the context in which leadership occurs (Gardner, Coglisier, Davis, & Dickens, 2011). The specific context of an organisation can be described, for example, through the company's life cycle, where different leadership factors will be manifested depending on the entrepreneurial phase that it is in (Antonakis & Autio, 2007; Vecchio, 2003).

Founders and their behaviour and leadership capacity can have significant impacts on entrepreneurship development (Cabrera & Mauricio, 2017) because they are crucial for the development and shaping of organisations, especially young organisations (Kempster & Cope, 2010). If leadership is an important driver of entrepreneurial growth, then identifying tasks and impacting factors in the start-up stage is a critical study focus (Zaech & Baldegger, 2017). To counteract the paucity of research on leadership in start-ups both theoretically and empirically (Zaech & Baldegger, 2017), we propose studying specific EL behaviours in different situations (Gartner, Bird, & Srarr, 1992), depending on the venture's life cycle (Parker, 2011).

Baron (2002) identifies three stages of the venture cycle, which are: the pre-launch, launch or nascent stage, the post-launch phase and the maturity phase. Entrepreneurs' behaviours and responses are expected to differ in early entrepreneurship growth stages from those observed when the firm reaches maturity (Kesidou & Carter, 2018). To understand the behaviours required in each stage of the venture lifecycle for business growth and development, we use a chronological framework. This allows us to present and discuss the factors characterising FEL by investigating effects during women's entrepreneurial life cycle (Kesidou & Carter, 2018), specifically in the launch, which we call the early-stage, and maturity stages of the entrepreneurial cycle proposed by Baron (2002).

Start-up or nascent phase

In the start-up phase, entrepreneurs have some experience in the process of setting up a business (Wasdani & Mathew, 2014). They have not only the ability to recognise opportunities, but also networks that can encourage them to take the business forward and provide them with the necessary emotional support and resources, such as financial resources (Wasdani & Mathew, 2014). Self-efficacy also plays an important role because being confident in one's skills and competences helps entrepreneurs to sustain the creation process when facing different challenges and difficulties (Bandura, 1977). In addition, their achievement orientation also keeps them motivated because they have already started to suffer the setbacks of the entrepreneurial reality (Kesidou & Carter, 2018). EL is considered one of the most significant organisational elements in conditioning entrepreneurial activity (Ensley, Pearce, & Hmieleski, 2006). Following these statements, the first hypothesis that we put forward arises:

H1. FEL factors are positively related to the launching or nascent phase of entrepreneurship.

Post-launch or maturity phase

According to Wasdani (2014), entrepreneurs in the consolidation stage have gained sufficient experience in the start-up process that they have selected, and they have trained in their close networks. The perception of efficacy may still be important for overcoming challenges by increasing their confidence in their skills and competences in this later stage (Becherer et al., 2008). Entrepreneurs' motivation in this stage is clearly oriented towards economic achievement as they have successfully overcome the initial difficulties associated with setting up and sustaining a business (Wasdani & Mathew, 2014). Entrepreneurs' ability to recognise and seize opportunities (Shane & Venkataraman, 2000) also plays an important role in this phase because they can be exploited to turn them into reality (Arenius & Minniti, 2005). Therefore, we put forward the second hypothesis:

H2. FEL factors are positively related to the consolidation phase of entrepreneurship

Based on these theoretical foundations, a first conceptual research model is established, in which the unobservable theoretical construct is "FEL", which is reflexively formed by the exogenous variables constituted by different leadership characteristics (see Figure 1), with

impacts on the endogenous conceptual variable that is the new venture's conception and launching phase.

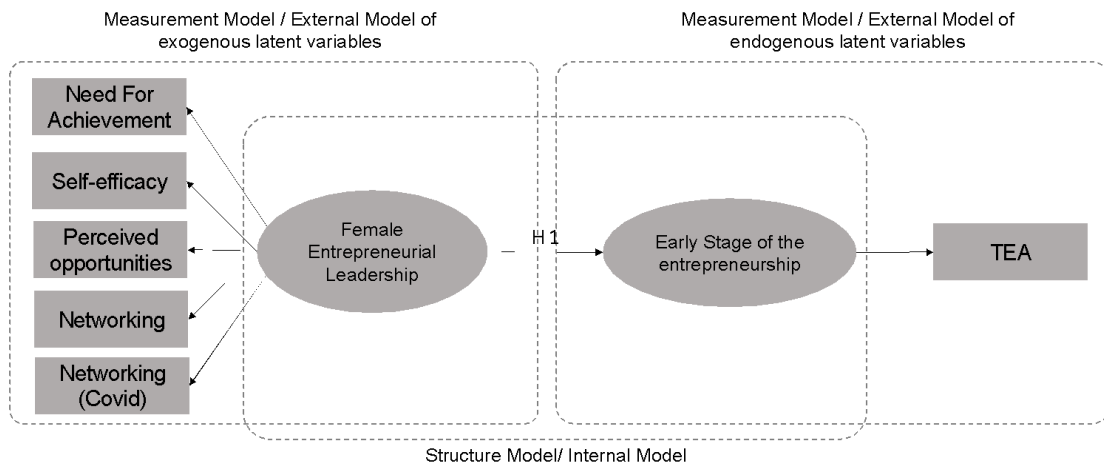


Figure 1. Proposed early stage of the entrepreneurship research model

Source: the authors, 2022

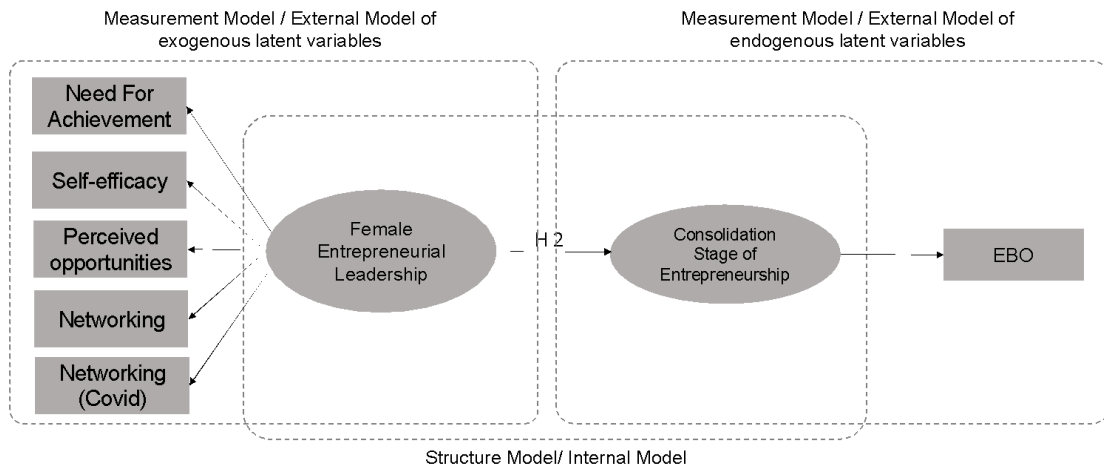


Figure 2. Proposed consolidation stage of the entrepreneurship research model

Source: the authors, 2022

According to Figure 2, the second relational model investigates the impacts that leadership factors have on female entrepreneurship in its consolidation phase.

3. RESEARCH METHODOLOGY AND DATA

3.1. Data collection, sample and measures

The employed data come from the 2020-2021 GEM's "Women's Entrepreneurship: Thriving Through Crisis" Adult Population Survey (APS), which is the largest annual entrepreneurship survey to provide data on entrepreneurship patterns and trends in the studied economies (Singer et al., 2015). The APS collects individual-level data through a standardised survey instrument that is administered to representative samples of at least 2,000 adults from adult populations in each participating country with varying levels of socio-economic development for consolidation per country. For the present research, the APS survey data are taken from women aged 18-64 years in 43 countries around the world with different socio-economic contexts (see Table 1). The data

collection period goes from 2020 to 2021 and, therefore, includes data from a pandemic environment with questions to capture the business impacts of COVID-19, including questions on the reason for business closure, new business opportunities, growth expectations and the quality of government support.

Table 1. GEM Sample Profile of the 43 countries (source: GEM)

Year of Data Collection	2020/2021
Low-income countries	India (Central and East Asia) Angola, Burkina Faso, Egypt, Morocco, Togo (Middle East and Africa)
Middle-income countries	Indonesia, Kazakhstan (Central and East Asia) Russian Federation (Europe and North America) Brazil, Colombia, Guatemala (Latin America and Caribbean) Iran (Middle East and Africa)
High-income countries	Republic of Korea, Taiwan (Central and East Asia) Austria, Canada, Croatia, Cyprus, Germany, Greece, Italy, Latvia, Luxembourg, Netherlands, Norway, Poland, Slovakia, Republic of Slovenia, Spain, Sweden, Switzerland, United Kingdom, United States of America (Europe and North America) Chile, Panama, Uruguay (Latin America and Caribbean) Israel, Kuwait, Oman, Qatar, Saudi Arabia, United Arab Emirates (Middle East and Africa)
Sample characteristics	Representation of women adult population workers, no workers, entrepreneurs with or without revenues (18-64 years old)
Education	Primary and Secondary School and Higher Education

In addition, GEM data are used to identify exogenous latent explanatory variables. The variable Need for Achievement in research can be formulated as one of the motives for starting a business being high income, which will guide women entrepreneurs' behaviour. In GEM, it is referred to as "to build great wealth or very high income". In perceived entrepreneurial opportunities terms, the variable "Perceived opportunities" was taken as the percentage of women aged 18-64 who agreed that they saw good opportunities for starting a business in the area where they lived. Entrepreneurial self-efficacy, taken in this study as the perception of skills, knowledge and experience to start a business for entrepreneurship, would be the "Perceived capabilities" dimension in GEM. This variable is referred to as "Self-efficacy" in the rest of this paper. Finally for "Networking" in GEM, we also take the variable "Personally know an entrepreneur", which is the percentage of women aged 18-64 who personally know someone who has started a business in the last 2 years. We also take into account the context triggered by COVID-19 with the pandemic-related indicator "Knowing an Entrepreneur Who Started a Business", which refers to knowing someone who has started a business because of the pandemic.

To identify each entrepreneurship stage, a sequence of two major stages in the entrepreneurial process is worked out. The early stage, in which a business is less than three and a half years old, comprises its start-up in the first 3 months of its existence and can last up to 42 months, is known as the nascent and new venture phase, and forms the endogenous indicator Total Early Stage (TEA) obtained from GEM. Then there is the late stage, in which the business is more than three and a half years old, and the company is already established and is known as the Established Business Ownership (EBO) endogenous indicator from GEM.

A preliminary data analysis is firstly carried out to address issues like missing values, outliers and data non-normality.

3.2. The PLS-SEM analysis

In this article, two relational models with their research hypotheses (see Figures 1 and 2) are proposed and are analysed using structural equation modelling (SEM) based on an analysis of variance (Hair, Hult, et al., 2017). Specifically, the PLS path-modelling technique (Roldán & Sanchez-Franco, 2012). Is used. This methodology is employed mainly for explanatory, confirmatory, exploratory, descriptive or predictive purposes (Benitez, Henseler, Castillo, & Schuberth, 2020; Chin et al., 2020). PLS-SEM is a value-analytic method that assesses both explanation and prediction when testing theoretical models (Criado-Gomis, Iniesta-Bonillo, & Cervera-Taulet, 2018; Hair, 2021). Some of the main aspects of this approach are that it does not require any uniformity of the metrics of variables and it can estimate models with small samples, as long as they are representative of a population, and without forgetting the basic statistical rules of validity (Petter & Hadavi, 2021). Furthermore, to apply this second-generation statistical methodology, we use the SmartPLS 3.3.3. software, which is one of the leading software packages for PLS-based SEM (Ringle, Wende & Becker, 2015).

In our research, PLS allows us to assess the reliability and validity of the measurement models of each theoretical construct established in the two proposed models. It also allows us to estimate the sign and significance of the different hypothesised relations between the structural model's constructs. Our research follows the steps suggested by Henseler et al. (2016) (Henseler, Hubona, & Ray, 2016).

First of all, a nomological network is constructed, where constructs are included with the involved variables (need for achievement, perceived opportunities, self-efficacy, network, network in a COVID-19 environment for the exogenous, and TEA and EBO for the endogenous) (see Figures 1 and 2). In this way, the relations of the construct between the latent variable and the exogenous indicators are represented through the path relations, and also between the construct with its endogenous indicator.

Secondly, both the measurement model's validity and reliability are assessed. The measurement model aims to determine whether the observable variables accurately measure the theoretical ideas. We should specify that in the two proposed models, the manifest variables are constructed reflexively; i.e. "can be seen as a representative sample of the possible items available within the conceptual domain of the construct" (Sarstedt, Hair, Ringle, Thiele, & Gudergan, 2016). In reflective modalities, the most essential metrics used to evaluate the measurement model are internal consistency reliability, convergent validity and discriminant validity (Hair, Hult, et al., 2017).

Finally, an evaluation of the structural model is conducted to determine whether the hypotheses are supported. The significance and magnitude of the relations between the different variables are assessed with analyses of collinearity, the sign, magnitude and significance of the path coefficient, the coefficients of determination and the effect size.

4. RESULTS

4.1. The first model with early-stage entrepreneurship

Measurement model evaluation

Firstly, internal consistency, i.e., construct reliability, is assessed using the following assumptions that must all equal or exceed 0.7: Cronbach's alpha (Hair, Hult, et al., 2017), composite reliability (ρ_c) (Ali, Rasoolimanesh, Sarstedt, Ringle, & Ryu, 2018) and Dijkstra Henseler's Rho_A (ρ_A) (Dijkstra & Schermelleh-Engel, 2014). The values for this study meet these criteria (see Table 2).

Table 2. Internal consistency and convergent validity (source: the authors with PLS, 2022)

	Outer loadings	Cronbach's alpha	rho_A	ρ_c	AVE
<i>Female Entrepreneurial Leadership</i>		0.799	0.848	0.860	0.558
Need for achievement	0.507				
Self-efficacy	0.859				
Perceived Opportunities	0.767				
Networking	0.718				
Networking (Covid)	0.832				
<i>Early-stage entrepreneurship</i>		1	1	1	1

Secondly, convergent validity, which is the degree to which a measure correlates positively with alternative measures of the same construct, is analysed through the outer loadings of the indicators and the average variance extracted (AVE) (Hair, Hult, et al., 2017). External loadings (λ) are used for the reliability of each measure, which must be ≥ 0.707 to be accepted as part of a construct (Carmines & Zeller, 1979). As loadings are correlations, a level that equals or exceeds 0.707 implies that more than 50% of the observed variance is shared by the construct. The indicators that do not meet the above criteria can be removed by "item purging". However, several researchers believe that this rule of thumb should not be as rigid in the early scale development stages (Chin, 1998). The reliability analyses in our first model detect that the loading of the Need for Achievement indicator is below 0.707 ($\lambda = 0.507$). So, we decided to not remove it from the model following the recommendation of Hair et al. (2017). In fact, the reliability results are not affected (see Table 2). The AVE, which should be ≥ 0.5 (Ali et al., 2018), is validated for the FEL construct ($=0.588$), which indicates that, on average, the construct explains more than half the variance of its indicators.

Table 3. Discriminant validity (source: the authors with PLS, 2022)

<i>Cross loadings</i>	FEL	ESE
Need for achievement	0.507	0.231
Self-efficacy	0.859	0.623
Perceived Opportunities	0.767	0.401
Networking	0.718	0.417
Networking (Covid)	0.832	0.606
TEA	0.668	1

Abbreviations: ESE: Early-stage entrepreneurship

Finally, discriminant validity (Hair, Hult, et al., 2017) is examined using cross-loadings, which state that no item should load more on one concept other than that it intends to measure (Barclay,

Higgins, & Thompson, 1995). In our case, this is met (see Table 3). The other two methods to determine discriminant validity and to verify the constructs are: the Fornell-Larcker criterion (\sqrt{AVE} = must be higher than the correlation with other constructs) (Fornell & Larcker, 1981), which gives $\sqrt{AVE}_{FEL} = 0.747$ and $\sqrt{AVE}_{ESE} = 1$; the Heterotrait-monotrait (HTMT) ratio, which is HTMT-FEL-ESE and equals 0.709 (which is ≤ 0.9) (Henseler, Ringle, & Sarstedt, 2015).

Structural model assessment and hypotheses testing

Next structural models are examined to see if they correctly predict the hypotheses. First of all, collinearity is assessed with the variance inflation factor (VIF), which should be < 3 (Ali et al., 2018). Secondly, the significance and relevance of the structural model's relations must be assessed with the standardised paths, which must take values above 0.20 (Ali et al., 2018). Thirdly, the coefficient of determination R^2 is assessed, which must lie between 0 and 1 for the construct to be acceptable (Hair, Hollingsworth, Randolph, & Chong, 2017). Finally, the effect size (f^2) is assessed, which is considered weak if it is between 0.02 and 0.15, moderate if it goes from 0.15 to 0.35 and strong if it exceeds 0.35 (Hair, Hult, et al., 2017).

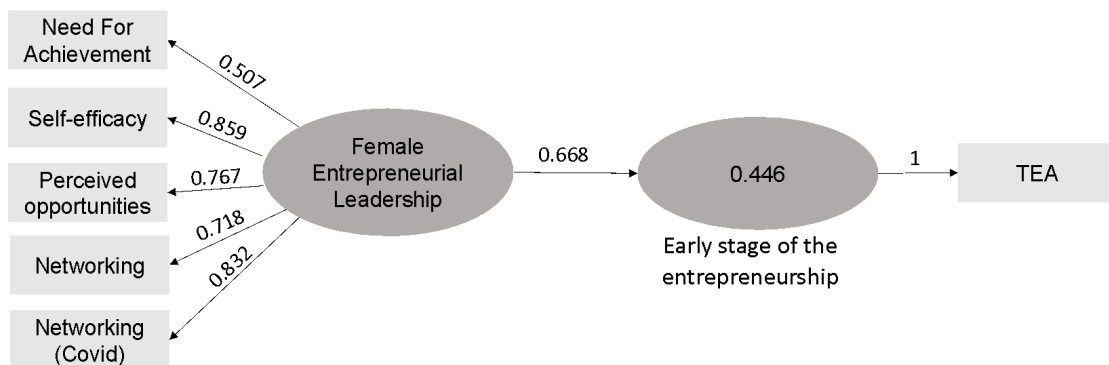


Figure 3. The first model results

Source: the authors, 2022

The evaluation of our model's structural model shows the non-existence of multicollinearity in both relations because the VIF equals 1. In relation to hypothesis H1, the results show that leadership factors positively condition the early-stage female entrepreneurship phase which confirms the established theoretical postulate (the standardised path coefficient takes a highly relevant value = 0.668, $t = 7.294$, and the coefficient with bootstrapping of 5,000 subsamples is positive and < 0.05 ; $p\text{-value}=0$). The 5% and 95% confidence intervals (CI) also demonstrate restricted variability (see Table 4 and Figure 3). This finding supports hypothesis H1 given a positive and significant relation between the combination of leadership factors and early-stage female entrepreneurship drive. R^2 is 0.446, which is considered a significant value for implying that the leadership factors explain about 45% of the variance of launching and conception in entrepreneurship. The FEL factors have a very strong effect on early-stage female entrepreneurship ($f^2 = 0.807$) according to the effect size analysis, which assesses changes in R^2 terms (see Figure 3).

Table 4. Structural model: hypotheses test result (source: the authors with PLS, 2022)

Direct Effects	Path coefficient	t-Value	p-Value	f ²	95% CI	Supported
FEL → ESE (R ² =0.446)	0.668	7.294	0.00	0.807	[0.542-0.820]	Yes H1

4.2 The second model

Measurement model evaluation

The model is validated as reliable and confiable, as shown in Table 5. The measurement model's convergent and discriminant validity is also proven with an AVE ≥ 0.5, and because external loadings are above 0.707 or close to ($\lambda_{\text{networking}} = 0.645$), plus an HTMT= 0.152 < 0.9 and adequate cross-loadings and Fornell-Larker criterion.

Table 5. Composites and measures (source: the authors with PLS, 2022)

	Outer loadings	Cronbach's alpha	rho_A	pc	AVE
Female Entrepreneurial Leadership		0.799	0.722	0.846	0.525
Need for achievement	0.736				
Self-efficacy	0.734				
Perceived Opportunities	0.785				
Networking	0.645				
Networking (COVID-19)	0.718				
Consolidation stage entrepreneurship		1	1	1	1

Structural model assessment

The structural model reveals a negative path value that equals -0.185 (see Table 6 and Figure 4) and with a very weak R² of 0.034, which implies that the leadership factors barely explain 3% of the variance in the consolidation phase. Furthermore, the path value = 0.258 after bootstrapping invalidates Hypothesis 2. Therefore, the premise that the combination of leadership factors used in research is positively related to the consolidation phase of female entrepreneurship is not supported by this model.

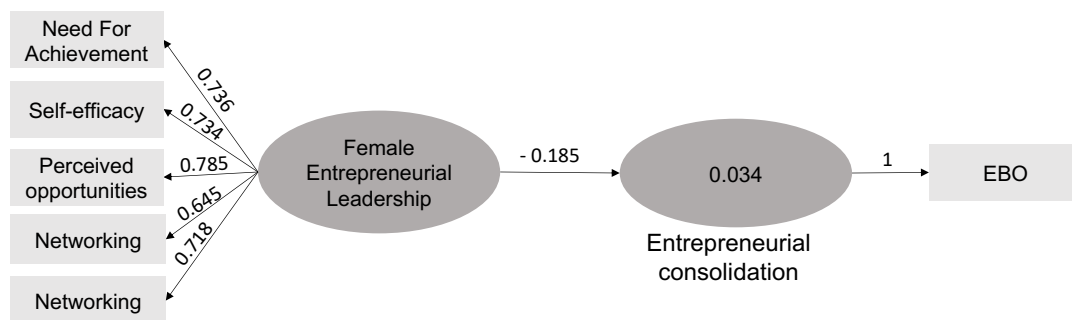


Figure 4. The first model results

Source: the authors, 2022

Table 6. Structural model: hypotheses test result (source: the authors with PLS, 2022)

Direct Effects	Path coefficient	t-Value	p-Value	f ²	95% CI	Supported
FEL → CE (R ² =0.034)	-0.185	0.519	0.258	0.035	[0.031-0.239]	NO H2

5.DISCUSSION

The aim of this research is to explore the impact of certain combinations of leadership factors on female entrepreneurship, such as need for achievement, self-efficacy, perceived opportunity, networking and networking in a COVID-19 environment, with two relational models throughout different entrepreneurial process phases from a gender perspective in a COVID-19 context. With the first model, we investigate the impact on the company's start-up and launch stages. The second model investigates how these factors condition the continuity of entrepreneurial activity. Two PLS-SEM models are constructed by a variance-based technique to confirm the likely direct effects.

The analysis of the first model validates the relations between the exogenous indicators of need for achievement, self-efficacy, perceived opportunity, networking and networking in a COVID-19 environment and the FEL construct, as determined in the theoretical framework study. The proposed model has good predictive ability, accurate and valid measurements, and a close and significant relation between constructs. The results reveal a strong positive association between the FEL factors and the start-up and early entrepreneurship stages because they explain 45% of the variance of early-stage of entrepreneurship. As a result, it can be stated that Hypothesis 1 is validated, the FEL factors positively influence early-stage of entrepreneurship, which is consistent with the theory addressed by several non-gendered authors (Antonakis & Autio, 2007; Kesidou & Carter, 2018; Vecchio, 2003; Wasdani & Mathew, 2014). However, the second model does not confirm a good fit between the data and theory and, although the data reveal feasible and reliable measured models, the structural model does not confirm Hypothesis 2. Therefore, the combination of the factors adopted in model 1 could not be tested in model 2.

This might be logical because, in early start-up phases, it is important to know an entrepreneur, to be confident in one's own capabilities, knowledge and skills, to well perceive opportunities, possess clear results orientation (Antonakis & Autio, 2007; Baldegger & Gast, 2016; Kesidou & Carter, 2018; Vecchio, 2003; Wasdani & Mathew, 2014) and also know entrepreneurs in a COVID-19 context to reinforce the importance of the context and the stage that the venture in is when leadership factors are manifested. However, when the company is well-established and has been operating for more than 3.5 years, these same EL factors are probably not necessary and others are required. This result coincides with some points in the works of Vecchio (2003), Antonakis et al. (2007) and Wasdani et al. (2014) who point out the importance of the context and the stage that entrepreneurs are in because they use different skills, knowledge, traits and behaviours. Founders' leadership behaviour emerges and evolves over time so they are not limited to apply one type of leadership behaviour, but must alter their behaviour according to the respective context regardless of it being a start-up or early-growth company (Baldegger, Urs Gast, Johanna, 2006).

This clearly contrasts with claims that leadership factors in entrepreneurship are universal and unchangeable (Den Hartog et al., 1999; Gupta et al., 2004).

6. CONCLUSIONS

This study produces several results that can be considered significant contributions to the current body of knowledge on analysing how certain combinations of leadership factors impact the different female entrepreneurship cycles. Its contribution to the literature is relevant thanks to its threefold contribution: it bridges one of the empirical gaps of attributes of FEL by empirically proving that combinations of leadership factors do not have the same impact on different entrepreneurial activity phases; it sheds light on the impact of some specific factors, such as the need for achievement and the impact of networking, at a general level and at times of global pandemic, self-efficacy and the perception of opportunities for women entrepreneurs; it provides a gender perspective for more diverse advancements in this field.

One of the limitations of this study is the number of countries included given the data available in the employed databases. Although this work covers all international geographic areas, it can be extended to more countries.

As a future recommendation, this study should be conducted by exploring different combinations of leadership factors for the consolidation phase of female entrepreneurship by strengthening the applied contextual framework. For future research, it is also advisable to analyse different years and to verify the model's robustness. Furthermore, empirical models could be developed by choosing different FEL variables according to different entrepreneurship stages and studying the level of impact in relation to one another. This is an avenue to explore that could help its different stakeholders to considerably advance in the FEL field.

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CHAPTER VII. CONCLUSIONS

1. CONCLUSIONES

En este capítulo, se muestran las principales contribuciones y beneficios de la presente investigación. El objetivo principal de esta tesis doctoral es investigar si determinados factores de liderazgo impulsan el crecimiento del emprendimiento femenino, conocer cuáles son esas posibles combinaciones de factores y si se manifiestan en todas las fases del proceso emprendedor. Para servir a este propósito, se han realizado nueve trabajos independientes que conforman una investigación conjunta, de los cuales se presentan en esta tesis cinco publicaciones a través del formato de compendio de artículos. Los dos artículos presentados en los capítulos II y III de este documento se encuentran aceptados, y el primero ya está publicado; un tercer artículo se encuentra aceptado con modificaciones (capítulo V) y un cuarto artículo está sometido a revisión (capítulo VI). Además, dos *proceedings* académicos internacionales se encuentran publicados, otros dos aceptados, uno de los cuales se presenta en el capítulo IV, y un quinto trabajo académico nacional publicado (ver Appendix 2).

Uno de los primeros objetivos específicos era obtener una visión general del campo de los factores de liderazgo emprendedor, tanto con perspectiva de género como sin ella, para entender su estructura, su base fundacional y su tendencia. Los dos estudios bibliométricos aportan varias contribuciones relevantes. La primera aportación del estudio sin perspectiva de género es que los factores de liderazgo en el emprendimiento conforman un nuevo constructo llamado liderazgo emprendedor que genera un interés naciente a partir de 2015, y se reconoce como campo con identidad propia por parte de la comunidad científica a partir de 2018 (Aparisi-Torrijo, Ribes-Giner, 2022). Además, se pone en evidencia que todavía existen escasos marcos teóricos y conceptuales sobre este dominio. Tampoco existen suficientes pruebas empíricas del impacto de los factores de liderazgo en el crecimiento emprendedor a nivel general (Zaech & Baldegger, 2017). Estados Unidos e Inglaterra son los países más influyentes en ese campo. Desde la perspectiva de las mujeres emprendedoras, existe una escasa producción de publicación con un tímido crecimiento a partir de 2015. La segunda contribución significativa es que el liderazgo emprendedor no se beneficia de los avances obtenidos en los campos del emprendimiento y liderazgo en materia de género (R. Harrison, Leitch, & Mcadam, 2015) y sigue reproduciendo el mismo patrón de investigación tradicional. El discurso del liderazgo emprendedor tiende a reproducir los mismos sesgos masculinos dominantes. A pesar de que los estudios seminales cuentan con investigadores que fomentan las contribuciones desde perspectivas postestructuralistas más amplias (Ahl, 2006), todavía existe una tendencia a reproducir los enfoques de investigación tradicionales con lente de género masculino. Además, encontramos una posición dominante del discurso estadounidense en la comunidad discursiva en el campo del emprendimiento femenino (Ahl, 2004), en el campo del liderazgo y también en el campo de los factores del liderazgo emprendedor. Le sigue de lejos España como país más influyente. En conclusión, la literatura sin enfoque de género se ha desarrollado significativamente (Henry, Foss, & Ahl, 2015), pero todavía hay un largo camino por recorrer en la disciplina de los factores de liderazgo emprendedor femenino.

Un segundo objetivo era realizar una identificación y posterior análisis de los factores de liderazgo de las emprendedoras a través una revisión sistemática de la literatura. La revisión bibliográfica realizada en 71 artículos pone de manifiesto las dificultades para definir un marco global de las dimensiones que conforman el liderazgo emprendedor. Mediante esa investigación, se identificaron y recogieron 267 factores de liderazgo en el emprendimiento de las mujeres. Gracias a un análisis de co-ocurrencia de los factores, se descubre que los más frecuentes eran la innovación, la comunicación, el trabajo en red, la pasión, la asunción de riesgos, la visión, la oportunidad, la toma de decisiones, la autoeficacia, la necesidad de logro, entre otros. Un hallazgo interesante es que este estudio muestra factores de liderazgo en el emprendimiento que no son diferentes en función del género si lo comparamos con la única revisión de literatura realizada de factores de liderazgo sin lente de género de Harrison y Burnard (2016) (C. Harrison & Burnard, 2016) o con otros estudios realizados por numerosos investigadores (Cogliser & Brigham, 2004; Gupta, MacMillan & Surie, 2004; Lippit, 1987). Los factores son sustancialmente los mismos, reafirmando las principales afirmaciones de Ahl (2004) al alertar que, en los estudios con perspectiva de género, se tiende a subrayar las pequeñas diferencias entre hombres y mujeres mientras se ignoran las similitudes y las grandes coincidencias. Se suele ignorar todo lo relativo al contexto como la cultura, la legislación, los cambios del mercado laboral, los cambios políticos, las relaciones de poder entre hombres y mujeres, etc. (Ahl, 2004). En este estudio, destaca la importancia del contexto y el fuerte impacto tanto de la cultura como del entorno familiar que puede condicionar muchos negocios y sectores elegidos por las mujeres. Esto refuerza de nuevo el discurso de Ahl (2004), que pide un cambio de posicionamiento ampliando el objeto de investigación, para centrarnos menos en los individuos y las empresas individuales, y más en el contexto. Una de las principales limitaciones de dicho estudio es que no detecta en qué momentos del proceso emprendedor de las mujeres se manifiestan dichos factores.

El último objetivo es analizar precisamente cómo ciertas combinaciones de factores de liderazgo impactan en las diferentes fases del proceso emprendedor, tanto en su fase de lanzamiento, como en la de consolidación, sin enfoque de género y después con él. Para este fin, en la última parte de la tesis, se conceptualizaron los modelos relacionales. Gracias a los factores de liderazgo, obtenidos a través de la revisión de literatura, se pudo construir el constructo del liderazgo emprendedor elaborando el modelo de medida. Utilizando el conjunto de datos facilitados por el GEM con y sin enfoque de género (Bosma et al., 2020; Elam et al., 2021), se empleó un método cuantitativo de ecuaciones estructurales de mínimos cuadrados parciales (PLS-SEM) para validar esos modelos propuestos. Se evaluaron los modelos para validar las hipótesis planteadas.

Como conclusión general del trabajo y principal hallazgo, se confirma la relación positiva y significativa entre algunas capacidades de liderazgo en la etapa de lanzamiento del emprendimiento, pero no en la de consolidación. Realizamos una doble contribución al campo con estos hallazgos. En primer lugar, los factores como la visión, la capacidad de innovación, la autoeficacia y la creación de redes impactan positivamente la fase inicial del proceso emprendedor, aunque la percepción de oportunidades no queda probada en este modelo.

Además, bajo la perspectiva de género, demostramos que el desarrollo de factores de liderazgo como la autoeficacia, la percepción de oportunidades, la necesidad de logro, el trabajo en red, condicionarán positivamente la fase de lanzamiento del proceso emprendedor de las mujeres y por lo tanto su crecimiento.

En ambos trabajos, sin embargo, en fases más avanzadas del ciclo emprendedor las hipótesis no se ven respaldadas con esos factores de liderazgo. No se valida la moderación entre la combinación de esos factores y el crecimiento en una etapa más consolidada del emprendimiento. Esto es lógico, ya que, si el impacto de los factores mencionados es importante en las etapas iniciales, estos mismos factores de liderazgo emprendedor probablemente no sean necesarios cuando la empresa ya esté consolidada y lleve varios años funcionando. En segundo lugar, se refuerza la teoría de que los factores de liderazgo son contextuales al depender de la etapa en la que se encuentra el emprendimiento.

Con esta investigación, contribuimos al campo con implicaciones para la teoría y la práctica. Demostramos que los factores de liderazgo emprendedor son numerosos y su efectividad en el crecimiento de la actividad emprendedora depende de la fase en la que se encuentra. El contexto es por lo tanto un importante moderador de la eficacia del líder tal y como ya apuntaban Antonakis y Autio (2007) y Vecchio (2003).

Además, no encontramos ningún factor universalmente respaldado como eficaz y garante del crecimiento o el éxito en el emprendimiento en todas sus fases (Gupta et al., 2004) pero si rechazamos algunos factores que no tienen impacto en el crecimiento emprendedor en un momento de la actividad.

También destaca la importancia para el emprendimiento de las variables contextuales del país y la necesidad de emplear una perspectiva de género cuando se estudia el emprendimiento (Ahl, 2004; Gimenez-Jimenez, Edelman, Dawson, & Calabrò, 2020; Ribes-Giner et Al., 2018).

Este estudio beneficia numerosos grupos de interés. Los estudiosos del campo pueden avanzar en el enfoque contextual del liderazgo emprendedor. Las organizaciones académicas pueden elaborar programas formativos para estimular el crecimiento emprendedor trabajando algunos de los factores citados. En la práctica, los resultados de este estudio sirven de referencia útil para los profesionales formadores de las habilidades, comportamientos y competencias para los líderes emprendedores. Los responsables políticos pueden tomar decisiones mejor informadas. los agentes económicos que buscan realizar una actividad emprendedora o invertir en ella y los propios emprendedores podrán comprender mejor algunos drivers de crecimiento.

2. LIMITACIONES

Las principales limitaciones se detallan en varios puntos. En primer lugar, la base de datos utilizada en los análisis bibliométricos y de revisión de literatura proceden de la base de datos de la colección principal WoS, a pesar de estar considerada como una de las más influyentes para clasificar la investigación, puede tener algunas limitaciones como la de excluir revistas o trabajos que no están indexados por haber aparecido recientemente y que, por ejemplo, pueden ser

igualmente influyentes en este campo. Por lo tanto, se reconoce que, si se hubiera elegido otra base de datos, los resultados y las conclusiones podrían haber sido sensiblemente diferentes a los obtenidos.

En segundo lugar, el limitado número de países incluidos en los artículos empíricos dados los datos disponibles procedentes de las bases de datos utilizadas procedentes del GEM. Aunque este trabajo abarca todas las áreas geográficas internacionales, podría ampliarse a más países. Sería interesante en el futuro, desarrollar investigaciones en otros entornos similares o diferentes para realizar comparaciones y analizar los comportamientos y detectar posibles patrones de comportamiento.

Precisamente dada la limitación de las bases de datos, no se encuentran los mismos factores de liderazgo en los diferentes estudios del GEM con enfoque de género y sin enfoque por lo que las combinaciones de factores de liderazgo que conforman el constructo del liderazgo emprendedor podrían ser diferentes o más numerosas, obteniendo un coeficiente R_2 más satisfactorio y mayor.

3. FUTURAS LÍNEAS DE INVESTIGACIÓN

Una vez finalizada esta investigación, surgen una multitud de vías a explorar. Una de ellas sería la de realizar modelos empíricos más complejos y que contengan más variables de liderazgo emprendedor en función de las distintas etapas del emprendimiento, o incluso personalizadas en función de un sector determinado. No es lo mismo emprender en el sector de las TIC que emprender en el sector del textil. Estudiar diferentes variables en función de los distintos sectores puede resultar de interés para los agentes económicos que operan en él. Siguiendo las recomendaciones de Ahl (2004) se podría ampliar el objeto de investigación para incluir también aspectos sociales, culturales e institucionales y realizar un cambio epistemológico estudiando cómo se realiza el género en el contexto del emprendimiento en lugar de estudiar lo que es.

Para futuras investigaciones también sería recomendable analizar diferentes años con los mismos datos procedentes del GEM y verificar la robustez del modelo.

Además, podríamos realizar los modelos empíricos únicamente para emprendedores hombres con los mismos factores utilizados en el artículo del capítulo VI, para realizar comparaciones y estudiar si el género también influye. Con estos dos estudios se podrían realizar conclusiones más sólidas.

Como recomendación futura, para seguir investigando con enfoque de género y aportar un enfoque más diverso, se podría complementar este estudio con una investigación longitudinal a través de casos de estudio de diferentes perfiles de emprendedoras a lo largo del proceso emprendedor y analizando cómo los diferentes contextos culturales, sociales y económicos pueden impactar en los factores de liderazgo que se necesitan, y éstos, a su vez, como impactan en el emprendimiento de las mujeres. Esto supone una nueva vía de exploración muy prometedora que puede permitir que el campo siga avanzando.

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APPENDIX

Appendix 1. Factores de liderazgo emprendedor femenino por autores

Haddaji, M et al. (2017) resilience; learning orientation; competent; education; organization; managerial effectiveness; practice; quickness; expertise technical; work under pressure; communication; negotiation; passion; competitive; patience; tenacity; dedicated; perseverance; sacrifice; willingness; hard work; discipline; sensitive; affection; physical and mental resistance; force of character; consistency; attention to details; managing emotions; receiving support; self-confidence; gain others confidence; take risks; communication	Zapalska, AM et al. (2015) communication; vision; creativity; innovation; encourage; idealized influence; inspirational motivation; intellectual stimulation; individual consideration; focusing service; customer centric; plan; flexible; passion; keeping track of business direction; not giving up; interpersonal relationships; charisma; interpersonal skills; personal contacts; understand individual talent and need; trust; respect; share ideas; care; listen; solving problems; compassionate	Cho, Y et al. (2020) humility; self-confidence; opportunity; network; self-efficacy; influence; authenticity; innovation; ideas; challenging spirit; passion; communication; persistence; enthusiastic; strong sense of self; take on challenges	expertise technical; positive outlook; business ethics and principles; network; innovation; commitment	Raudeliuniene, J et al. (2018) passion; personality; self-confidence; responsibility; proactivity; discipline; learning orientation; professional knowledge; performance; effective communication; network; collaboration; interpersonal impact; supportive environment; flexible-work; motivation; inspiration; vision; team building; decision making				
Huq, A et al. (2020) client relationships; values and culture family oriented; network; team; integrity; passion; collaboration; communication; innovation; work life balance; honesty; transparency; empathy; reward; training; development opportunities; communicate expectations; promote; feel valued; respect	McGowan, P et al. (2015) determination; motivation; organization; network; vision; opportunity; innovation; take risks; proactivity; competent; emotional alignment; team orientation; flexible; adaptability; need for achievement; inspiring	Bamiatzi, V et al. (2015) trust; creativity; innovation; respect; development; inspiration; wellbeing; decision making; interpersonal skills; perseverance; self-confidence; communication; self-management skills	Kakabadse, NK et al. (2018) co-development and co-construction among leaders; making sense of complex environments; goal achievement; self-fulfillment; hope; effectiveness; resilience; optimism; accountability	Foo, CT et al. (2006) pragmatic; future-oriented; emotional energy; passion; initiative; make changes; adaptability; control-minded; reflective; communication; sensitive; feeling-oriented; avoid risk-taking aversion	Gundry, LK et al. (2001) influence; motivation; stimulation; consideration; reward; trust; respect; development; inspiration; intellectual stimulation; creativity; responsibility			
Bertonecclj, A et al. (2009) proactivity; opportunity; analyze; justify; plan; need for achievement; autonomy; dexterity	Yadav, DS et al. (2014) management orientation; economic motivation; take risks; self-confidence; need for achievement; leadership ability; available assistance; decision making; innovation	Fischer, D (2019) relationships stakeholder; relational leadership; audience-targeted behavior; decision making; network; communication; trust; empowerment; trust	Torres, FC et al. (2017) intrapersonal skills; interpersonal skills; task specific skills; cognitive skills; communication; locus of control; take risks; proactivity; innovation	Sims, CM et al. (2018) compassionate; authenticity; servant leadership; agency; humility; trust; respect; self-development; stewardship; providing direction	Ramadani, V et al. (2017) patience; tenacity; thriftiness; commitment; gratitude; diligence; respect; discipline; organization; thoughtful; competent; experience			
Garrigos, JA et al. (2020) dedicated; commitment; sacrifice; passion; mentored; ambitious; need for achievement; adaptability; lean in and fit; take risks; opportunity; building consensus; supporting staff; diplomatic; determined to succeed; authority; competitive; initiative; confidence; self-challenging; responsibility	Pedroza-Gutierrez, C. (2019) organization; network; managerial skills; discipline; negotiation; ability to lead; authority; power of command; passion; decision making	Antunes, LGR et al. (2020) identify skills; develop skills; loyalty; respect; trust; motivation; provide advice; guidance; evaluation; facilitation	Li, J et al. (2020) self-actualization; need for achievement; independence; apply knowledge and skills; enthusiastic; responsibility	Digan, SP et al. (2019) empowerment; competent; self-determination; ability to impact; managerial effectiveness; innovation	John, A. (2017) communication; plan; work and earn together; empowerment	Bernardino, S et al. (2018) openness to experience; agreeableness; conscientiousness; extraversion; emotional stability	Mali, P et al. (2020) power distance; collectivism; institutional; uncertainty avoidance; people orientation	
Bullough, A et al. (2015) encompassing; vision; inspiration; sacrifice; integrity; decision making; performance; motivation; influence	Junquera, B. (2011) vision; innovation; opportunity; communication; teamwork; relationships; take risks; proactivity; confidence; strong ethical values	Mueller, J. (2018) communication; network; negotiation; listen; sensitive; diplomatic; influence; perseverance; learning orientation; take risks; vision; courage	Ahmad, NH et al. (2018) opportunity; participation; encourage ideas; communication; give autonomy; innovation	Sökjer-Petersen, M et al. (2008) trust; network; personal relations; commitment; openness; honesty	Megheirkouni, M et al. (2020) personal attitudes; perceived behavioral control; entrepreneurial and personal life balance	Buttner, EH et al. (2001) preserving; mutual empowering; need for achievement; creating team	Buil-Fabrega, M et al. (2017) opportunity; create value; innovation; social commitment; sustainability	
Montiel-Campos, H (2019) public speaking; network; negotiation; confidence; inspiring; detect needs; influence; mentoring	Montiel-Campos, H (2019) opportunity; searching new information; connecting; evaluating opportunity; decision making; self-efficacy; hope; optimism; resilience	Halim, NAA et al. (2014) communication; relationships; symbolic communication; body language; cognitive complexity	Krakauer, P. et al. (2018) plan; opportunity; sociability; organization; leading; encourage; scheduling work; vision; network	Adom, K et al. (2019) passion; opportunity; adaptability; resilience; extrinsic motivations	Bendell, BL et al. (2019) self-goal-setting; self-talk; self-cueing; self-taught	Kuschel, K et al. (2017) perseverance; persistence; passion	Mahto, RV et al. (2018) learning orientation; innovation	Hyun, SH et al. (2019) self-efficacy; creativity
Dixit, JK et al. (2020) vision; delegative; curiosity; learning agility; cognitive ability; self-reflection; tolerance; decision making; self-development; receptive to feedback; network; determination; take risks; innovation; responsive; self-efficacy; self-confidence	Agarwal, S et al. (2020) passion; inspiration; self-realization; vision; help others; creativity; self-confidence; commitment; perseverance; innovation	Anzai, Y et al. (2016) innovation; creativity; courage; commitment; take on challenges; take risks; vision; operational; sustainability	Cheng Wei, H. et al. (2012) innovation; trust; honesty; reliability; inspiring; participation; democratic	Fumero, A et al. (2015) leadership; creativity; need for achievement; personal control	Miao, C et al. (2018) emotional intelligence	Riantoputra, CD et al. (2020) passion; future-oriented	Dobrea, M et al. (2015) locus of control; self-efficacy	Cater, JJ et al. (2020) self-efficacy; take risks; tolerance of ambiguity
Bodolica, V et al. (2015) opportunity; self-accomplishment; take risks; organizing skills; commitment; innovation; stakeholders value creation; looked beyond profit rationales; vision; network; communication; honesty; adaptability; persistence	Sastre-Merino, S et al. (2013) innovation; organization; motivation; commitment; communication; time management; teamwork	Tlais, HA et al. (2019) break social rules; taking control; vision; hard work; compliance; adaptability; disregard; defiance; resistance	Martinez, KRG et al. (2018) desirability; self-efficacy; facilitating conditions; risk perceived	Sudarmanti, R et al. (2015) communication; listen; persuading; care; self-worth	Hallward, MC et al. (2020) determination; grit; innovation; influence	Dean, H et al. (2017) decision making	Ndemo, B et al. (2007) decision making	Mueller, SL et al. (2013) self-efficacy
		Fernandez, JS et al. (2020) leadership; agency; hope; resilience; address issues; engagement		Botha, M et al. (2020) innovation; self-efficacy; motivation; need for achievement	Nursanti, TD et al. (2018) low task-orientation; result-orientation; take risks	Li, CY et al. (2013) network	Nambiar, Y et al. (2020) network	Hmieleski, KM et al. (2019) creativity
					Gimenez-Jimenez, D et al. (2020) avoid risk-taking aversion	Goltz, S et al. (2015) leadership; empowerment	Li, CY et al. (2013) relationship orientation	Arun, TM et al. (2020) innovation

Figura 2. Factores de liderazgo en el emprendimiento femenino identificados por autores (fuente: los autores)

Appendix 2. Revistas y Congresos

Congresos Internacionales

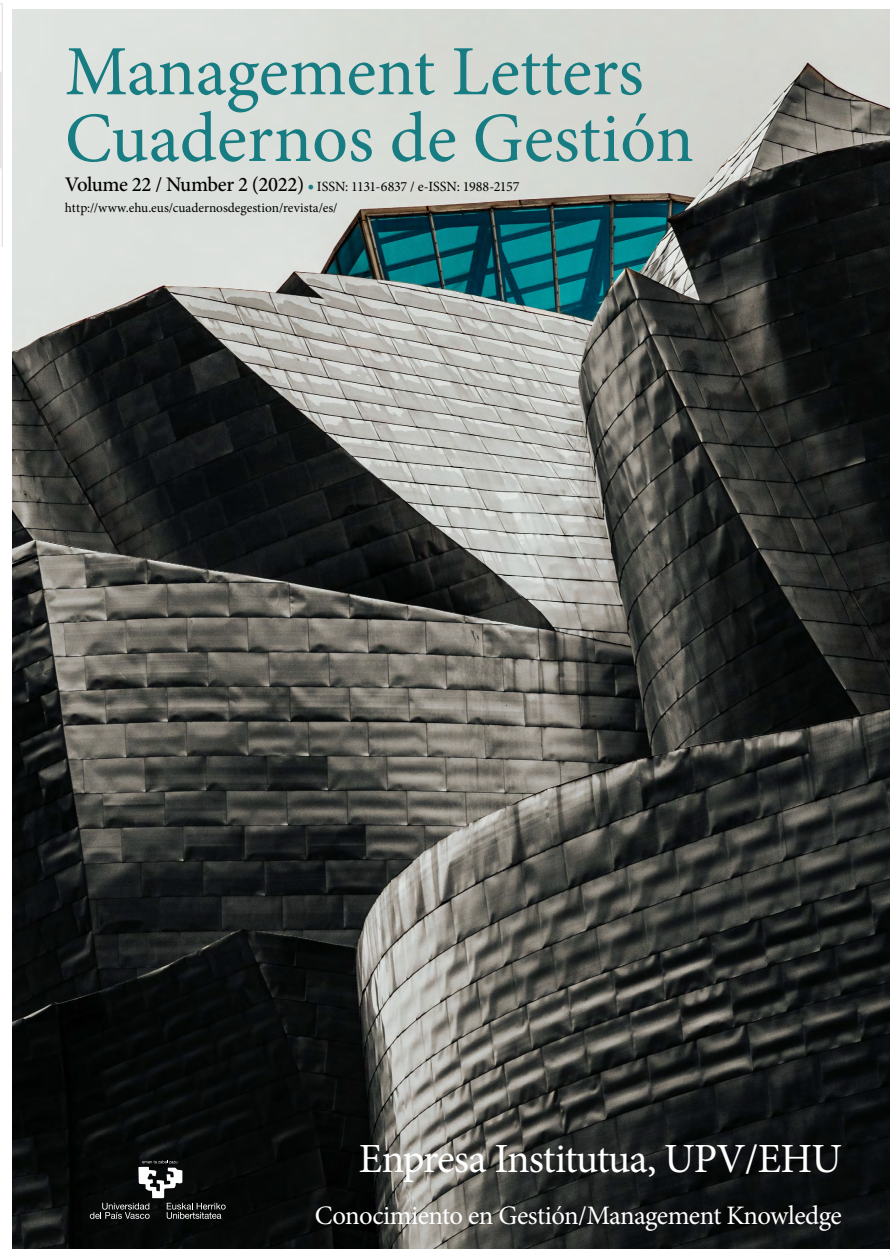
[Artículo 1]

Aparisi-Torrijo, Sofia; Ribes-Giner, Gabriela. (2022). **Entrepreneurial leadership factors: a bibliometric analysis for the 2000-2020 period**. Management Letters/Cuadernos de Gestión, (22) 2, 45-60. [10.5295/cdg.211456sa](https://doi.org/10.5295/cdg.211456sa) (CiteScore₂₀₂₁=1.7/ SJR_{Economics}= Q2/ SJR₂₀₂₁=0.24)

Este artículo se presenta en el capítulo II.

Management Letters / Cuadernos de Gestión position (CiteScore 2021 = 1.7)

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Entrepreneurial leadership factors: a bibliometric analysis for the 2000-2020 period *Factores en el liderazgo emprendedor: un análisis bibliométrico durante el periodo 2000-2020*

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ABSTRACT

This work aims to present an overview of the factors, attributes or behaviour of entrepreneurial leadership research with a comprehensive bibliometric analysis. 1,594 articles, dated from 2000 to December 2020, were taken from the main Web of Science database collection and analysed with a bibliometric study using performance analysis and scientific mapping methods. To evaluate the importance, quality and impact of publications, indicators like productivity, citations or h-index were used to obtain an analysis of trends and advances on the most relevant publications, authors, journals and countries. Research was complemented by scientific mapping obtained through co-citations, bibliographic couplings, co-occurrences and co-authorships. The results show that the trend of publications has considerably increased since 2015, and the highest productivity was recorded in 2020. The USA and England are two of the most influential publishing countries, although the network analysis reveals cooperation with different countries. The most productive journal is Sustainability and the most influential is the Journal of Business Venturing. This systematic mapping of the field helps to illustrate the research evolution over time, identifies areas of current interest for use in theoretical and empirical frameworks, and provides a solid roadmap for future research. The keyword analysis reveals that the term “entrepreneurial leadership” started to be used in its own right from around 2018 on average.

Keywords: Bibliometric Analysis, Entrepreneurial Leadership, Leadership Factors, Entrepreneurship, Co-citation.

RESUMEN

Este estudio presenta una visión general de la investigación sobre los factores, atributos o comportamientos de liderazgo en el emprendimiento a través de un exhaustivo análisis bibliométrico. Se extrajeron del año 2000 a diciembre de 2020, 1594 documentos de la colección principal de la base de datos Web of Science, y se analizaron a través de un estudio bibliométrico utilizando los métodos de análisis de rendimiento y el mapeo científico. Para evaluar la importancia, el impacto y la calidad de las publicaciones se usaron indicadores como la productividad, el número de citas o el índice-h, entre otros, obteniendo un análisis de tendencias y avances sobre las publicaciones, autores, revistas y países más relevantes. Además, se complementó el análisis gracias a una cartografía científica obtenida mediante técnicas de co-citaciones, acoplamiento bibliográfico, co-ocurrencias y coautorías. Los resultados muestran que la tendencia de publicación aumenta significativamente a partir de 2015 y es en 2020, cuando se registra la mayor productividad. Estados Unidos e Inglaterra figuran entre los más países más productivos e influyentes, aunque un análisis de la red revela cooperaciones entre diferentes países. Aunque la revista más productiva es Sustainability, la más influyente es Journal of Business Venturing. Además, el análisis de palabras clave revela que el término “liderazgo emprendedor” se comienza a utilizar por derecho propio entorno al 2018 como media. Este mapeo sistemático ayuda a ilustrar la evolución temporal de la investigación, identificar las áreas de interés actual para usarla en marcos teóricos y empíricos, y proporcionar una sólida hoja de ruta para la investigación futura.

Palabras clave: Análisis bibliométrico, Liderazgo Emprendedor, Factores de liderazgo, Emprendimiento, Co-citación.



[Artículo 2]

Aparisi-Torrijo, Sofía; Ribes-Giner, Gabriela. (2022). **Female entrepreneurial leadership factors**. *International Entrepreneurship and Management Journal*. (IEMJ-D-21-00390R2/ aceptación del artículo por parte de la revista con fecha del 16/03/2022) (JCR: Q2 / IF₂₀₂₀: 5.940) Este artículo se presenta en el capítulo III.



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[Artículo 4]

Aparisi-Torrijo, Sofía; Ribes-Giner, Gabriela; Chaves-Vargas Joana-Carolina. (2022). **How leadership factors impact different entrepreneurship phases: an analysis with pls-sem.** Journal of Business Economics and Management. (Presentado 26 de enero, aceptado con revisiones y reenviado el 14/04/2022) (IF₂₀₂₀= 2. 280/ JCR= Q2) y (SJR₂₀₂₀ = 0,49/ Q1).

Este artículo se presenta en el capítulo V.

Web of Science		Social Sciences Citation Index (SSCI)		Scopus		Economics, Econometrics and Finance	
Q2	Economics (177/377)	Q1	Economics and Econometrics				
Q4	Business (126/153)		Business, Management and Accounting	Q2	Business, Management and Accounting (miscellaneous)		
2020 JIF: 2.028	5 years JIF: 2.569	CiteScore 2020 3.5	SJR 2020 0.485	SNIP 2020 1.064			
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[Artículo 3]

Aparisi-Torrijo, Sofía; Ribes-Giner, Gabriela. (2022). **How do leadership factors impact different female entrepreneurship stages?** Economic Research-Ekonomska Istraživanja. (Enviado a revista y aceptado a revisión por pares) (IF₂₀₂₀= 3.034/ JCR= Q2) y (SJR₂₀₂₀ = 0.513/ Q1).

Este artículo se presenta en el capítulo VI.



Citation metrics

- **3.034 (2020)** Impact Factor
- **Q2 (2020)** Impact Factor Best Quartile
- **3.065 (2020)** 5 year IF
- **3.4 (2020)** CiteScore (Scopus)
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- 25 March 2022 Submission Incomplete
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PEER REVIEW ^

- 27 March 2022 Decision Pending
- 29 April 2022 With Editor
- 29 April 2022 Out for Review CONTACT
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Congresos Internacionales

[Congreso 1]

Aparisi-Torrijo, Sofia; Ribes-Giner, Gabriela (2021). **Impacto de los factores de liderazgo en el crecimiento del emprendimiento propuesta de un modelo relacional**. EN IX Congreso Internacional de Emprendimiento e Innovación (AFIDE 2021). (135 - 140). Online: Dykinson. ISBN: 978-84-1377-995-9



IX CONGRESO INTERNACIONAL DE EMPRENDIMIENTO E INNOVACIÓN

CERTIFICADO DE PARTICIPACIÓN

Dña. Sofia Aparisi-Torrijo

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Secretaría de AFIDE
Brizeida Raquel Hernández-Sánchez

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Miradas sobre el emprendimiento ante la crisis del coronavirus

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IMPACTO DE LOS FACTORES DE LIDERAZGO EN EL CRECIMIENTO DEL EMPRENDIMIENTO: PROPUESTA DE UN MODELO RELACIONAL

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RESUMEN

Los factores de liderazgo son reconocidos impulsores del emprendimiento. Para que las actividades emprendedoras puedan nacer, desarrollarse, transformarse y profesionalizarse, el líder necesita ciertas competencias, atributos o factores definidos como capacidades específicas de liderazgo a lo largo de todo el proceso emprendedor. Sin embargo, el consenso en la literatura sobre estos factores es escaso y, a su vez, también hay una falta de claridad sobre qué atributos impactan más en el emprendimiento y en qué momento. Esta investigación tiene por objeto realizar una propuesta de dos modelos de medida, que permitan analizar las relaciones entre distintas variables de liderazgo con relación a las distintas fases en la que se encuentra el emprendimiento. Es importante avanzar en el entendimiento de las características de liderazgo de los emprendedores para enriquecer el campo del liderazgo emprendedor y poder establecer programas formativos y acciones educativas que estimulen las economías a través de emprendimientos exitosos.

PALABRAS CLAVE: factores de liderazgo emprendedor, liderazgo emprendedor, modelo relacional.

ABSTRACT

Leadership factors are recognized drivers of entrepreneurial growth. In order for entrepreneurial activities to be born, developed, transformed and professionalised, the leader needs certain competencies, attributes or factors defined as specific leadership capabilities throughout the entrepreneurial process. However, there is little consensus in the literature on these factors and, in turn, there is also a lack of clarity about which attributes have the greatest impact on entrepreneurship and at what point in time. This research aims to propose two measurement models to analyse the relationships between different leadership variables in relation to the different stages of entrepreneurship. It is important to advance in the understanding of the leadership characteristics of entrepreneurs in order to enrich the field of entrepreneurial leadership and to be able to establish training programmes and educational actions that stimulate economies through successful entrepreneurship.

KEY WORDS: entrepreneurial leadership factors, entrepreneurial leadership, relational model.

INTRODUCCIÓN

Para que las actividades emprendedoras tengan éxito, el líder necesita ciertas competencias, atributos o factores definidos como capacidades específicas de liderazgo (Cogliser & Brigham, 2004; Fernald, Solomon & Tarabishy, 2005; Gupta, MacMillan, & Surie, 2004). Por ello, el campo del liderazgo emprendedor cobra cada vez más interés entre los académicos para entender mejor el proceso del emprendimiento. Este "nuevo paradigma" (Fernald et al., 2005) se refiere a los atributos del liderazgo en diversas condiciones y contextos emprendedores (Currie, Humphreys, Ucbasaran y Mcmanus, 2000; Gupta et al. 2004).

Es por lo tanto primordial identificar y comprender mejor qué factores o habilidades de liderazgo son los más importantes a la hora de cumplir con los retos de la gestión de un emprendimiento ya establecida o en el momento de crear esta nueva empresa. Sin embargo, no existe un real consenso sobre esos atributos (Harrison & Burnard, 2016) y faltan herramientas adecuadas para medir las características emprendedoras de los líderes (Renko, El Tarabishy, Carsted, & Brännback, 2015;

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LOS FACTORES DE LIDERAZGO EN EL EMPRENDIMIENTO: UNA COMPARACIÓN BIBLIOMÉTRICA CON Y SIN ENFOQUE DE GÉNERO

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RESUMEN

El liderazgo es un reconocido impulsor del emprendimiento. Para que las actividades emprendedoras tengan éxito, un emprendedor necesita ciertas competencias, atributos, comportamientos o factores de liderazgo a lo largo de toda su etapa emprendedora. Por ello, es importante identificar y comprender mejor qué factores se consideran más valiosos para superar los retos de la gestión de un emprendimiento. Sin embargo, existe escaso consenso sobre ellos y menos aún con prisma de género. Esta investigación tiene por objeto realizar un estudio comparativo de análisis bibliométricos, sobre la base Web of Science, de la literatura existente sobre las características del liderazgo en el emprendimiento con y sin enfoque de género, del periodo 2000 al 2020. Con esta metodología cuantitativa, se identificarán las tendencias de las publicaciones, los principales autores, los autores más citados, las revistas relevantes y los países con mayor publicación para contribuir al campo del liderazgo emprendedor.

PALABRAS CLAVE: factores de liderazgo emprendedor, emprendimiento femenino, género, análisis bibliométrico

ABSTRACT

Leadership is a recognized driver of entrepreneurship. For entrepreneurial activities to be successful, an entrepreneur needs certain competencies, attributes, behaviors or leadership factors throughout his entrepreneurial stage. It is therefore important to identify and better understand which factors are considered most valuable in overcoming the challenges of managing a venture. However, there is scarce consensus on these factors, and even less so with a gender perspective. This research aims to perform a comparative bibliometric analysis based on the existing literature in Web of Science, on the characteristics of leadership in entrepreneurship with and without a gender approach, from 2000 to 2020. With this quantitative methodology, the trends of publications, the main authors, the most cited authors, the relevant journals and the countries with the most publications will be identified in order to contribute to the field of entrepreneurial leadership.

KEY WORDS: entrepreneurial leadership factors, female entrepreneurship, gender, bibliometric analysis

INTRODUCCIÓN

El liderazgo es un reconocido impulsor del emprendimiento (Lewis, 2015) porque, para que las actividades emprendedoras tengan éxito, el líder necesita ciertas competencias, atributos o factores definidos como capacidades específicas de liderazgo (Gupta, MacMillan, & Surie, 2004; Fernald, L., Solomon, G. T., & Tarabishy, 2005).

En consecuencia, la investigación sobre el liderazgo en el emprendimiento ha sido objeto de un intenso debate entre los estudiosos para comprender el papel de ambos. Éste se ha resuelto con el establecimiento de un nuevo campo, el liderazgo emprendedor, que va más allá de la convergencia de los dos campos (Fernald et al., 2005). Este "nuevo paradigma" (Fernald et al. 2005) se refiere a los atributos del liderazgo en diversas condiciones y contextos empresariales (Gupta et al. 2004; Currie, Humphreys, Ucbasaran y Mcmanus, 2008). Para Kuratko (2007), no cabe duda de que "el liderazgo emprendedor se está convirtiendo en una necesidad global y cuanto más podamos entenderlos elementos que componen este concepto, más podremos avanzar en el concepto mismo" (pp.8).

[Congreso 3]

Aparisi-Torrijo, Sofía; Ribes-Giner, Gabriela. (2022). **The most important leadership factors in female entrepreneurship**. International Conference of Entrepreneurship, Education and Digital Transformation 2022 (TEC). (Aceptado y presentado)

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IDENTIFICACIÓN Y ANÁLISIS DE CONTENIDO DE LOS FACTORES DE LIDERAZGO DE LAS MUJERES EMPRENDEDORAS.

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Resumen

El liderazgo emprendedor es un campo de estudio relativamente reciente, y considerado por muchos académicos como un nuevo paradigma, que merece ser estudiado desde un enfoque de género. Para que las actividades emprendedoras se desarrollen y tengan éxito, se necesitan factores de liderazgo específicos. Sin embargo, aún no existe suficiente literatura que identifique claramente estas capacidades o habilidades de liderazgo que se manifiestan durante el proceso emprendedor y menos desde una lente de género. Esta investigación propone identificar los atributos de liderazgo emprendedor de las mujeres a través de varias etapas metodológicas. Mediante una revisión sistemática de la literatura, se identificó una base de 71 artículos que fueron sometidos a un análisis cuantitativo para comprender la estructura bibliográfica. A continuación, tras una revisión exhaustiva, se identificaron y recopilaron 267 factores de liderazgo. Por último, se propuso un análisis de ocurrencia de los factores para observar que los más frecuentes eran la innovación, la comunicación, la red, la pasión, la asunción de riesgos, la visión y la oportunidad, entre otros. Sin embargo, los resultados revelaron que aún no se ha alcanzado un consenso sobre la base teórica y conceptual del concepto ni de sus factores propios. Este trabajo pretende aportar, desde un enfoque basado en la evidencia, un censo de las capacidades de las mujeres del liderazgo emprendedor para aportar una visión más completa del liderazgo emprendedor y proponer recomendaciones para el futuro.

Keywords: Emprendimiento femenino; liderazgo emprendedor; género; identificación de factores de liderazgo; características

Introducción

La investigación sobre el liderazgo en el emprendimiento ha sido objeto de un intenso debate por parte de los académicos para entender el papel de ambos dominios, y se ha resuelto estableciendo un nuevo constructo, conocido como liderazgo emprendedor, que va más allá de la convergencia del liderazgo y del emprendimiento (Cogliser and Brigham 2004; Fernald, Solomon, and Tarabishy 2005). Este "nuevo paradigma" (Fernald, et al. 2005) se refiere a los atributos del liderazgo en diversas condiciones y contextos emprendedores (Gupta et al. 2004). Por lo tanto, es vital identificar y comprender mejor qué características de liderazgo se consideran más valiosas para superar los retos de la