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*Analysing the Impact of Digital Transformation and Entrepreneurial Orientation on  
Enhancing Organisational Resilience*

TESIS DOCTORAL

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# *Capítulo 1*

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# **1. INTRODUCCIÓN**

## **1.1. INTRODUCCIÓN AL TEMA DE ESTUDIO**

### **1.1.1. Introducción**

En la actualidad, las empresas operan en un entorno empresarial cada vez más turbulento e incierto (van der Vegt et al., 2015). Por tanto, es imperativo que las empresas fomenten su resiliencia organizativa e impulsen la innovación para poder no solo sobrevivir, sino también prosperar (Liu y Yin, 2020). Ante los cambios masivos propiciados por la plenitud de la era digital, las empresas deben transformar sus modelos de negocio. Esto les permitirá actuar y adaptarse con mayor celeridad a un entorno en constante evolución. Es esencial adaptarse a estos avances tecnológicos para que las empresas optimicen su agilidad y respondan de manera rápida al dinámico panorama empresarial. La integración de la transformación digital en las estrategias empresariales ya no es una opción; ha evolucionado para convertirse en un componente clave de la estrategia corporativa, reconfigurando la forma en que operan las empresas (Heavin y Power, 2018).

La devastadora situación provocada por la pandemia mundial de COVID-19 es solo un ejemplo. En el momento actual, muchas organizaciones, especialmente las pequeñas y medianas empresas (PYMES), ya no pueden permitirse el lujo de planificar estrategias por varios años, sino que luchan por encontrar planes de supervivencia para el próximo trimestre o incluso para los próximos meses (Kraus et al., 2020).

El panorama de la transformación digital ha experimentado cambios en las demandas empresariales y en las perspectivas de liderazgo, tanto antes como después del inicio de la pandemia de COVID-19. Decisiones que antes del brote se consideraban imprudentes o impulsadas por el crecimiento, ahora son fundamentales para la supervivencia. La integración entre el mundo en línea y el mundo fuera de línea se ha vuelto esencial, subrayando la urgente necesidad de que las empresas se adapten; no hacerlo puede poner en peligro su supervivencia (Zhang y Chen, 2023).

Además de su impacto en la vida diaria, la transformación digital ha alterado significativamente los procesos y roles de gestión de recursos humanos (Schmid y Pscherer,

2021). La continua evolución de las tecnologías digitales ha modificado la forma en que los departamentos de recursos humanos interactúan con la información y los datos. Funciones significativas como contratación, evaluación del desempeño y desarrollo de recursos humanos han experimentado profundas revisiones mediante la incorporación de tecnologías digitales, lo que ha dado como resultado una mejor prestación de servicios a las partes interesadas (Mosca, 2020).

A pesar de estos cambios, persisten algunas críticas en nuestra comprensión de la compleja interacción entre la transformación digital y el emprendimiento, así como su papel en la mejora de la resiliencia organizacional a través de la responsabilidad social. Aunque los equipos de desarrollo han demostrado su capacidad para mejorar las capacidades operativas y adaptativas, es necesario realizar una mayor exploración para descubrir cómo respaldan la continuidad y la resiliencia del negocio.

Investigaciones recientes han comenzado a revelar cómo la innovación y la transformación digital pueden contribuir a mejorar los procesos de negocio (Ciasullo et al., 2022; Wattiez y Goy, 2023). Además, aunque algunos estudios han examinado la relación entre transformación digital, emprendimiento y resiliencia organizacional (Martín-Rojas et al., 2023), aún queda mucho por aprender sobre los complejos mecanismos mediante los cuales estas dinámicas colectivamente moldean y mejoran la resiliencia.

La importancia de este fenómeno ha despertado un mayor interés entre investigadores y profesionales, quienes, desde diversas perspectivas, buscan comprender cómo esta transformación digital afecta la continuidad de las empresas. Por ende, este trabajo tiene como objetivo focalizarse en la interacción entre estas variables estratégicas para mejorar la resiliencia de las empresas.

Se utilizará un conjunto de cuatro artículos de investigación para examinar las sinergias entre la transformación digital, la resiliencia organizativa y diversas variables estratégicas que posibiliten mejoras.

### **1.1.2. Delimitación del tema objeto de estudio**

Nuestro objetivo en este trabajo de investigación es determinar la magnitud e impacto de algunas variables organizativas y tecnológicas como elementos que pueden afectar la resiliencia organizacional, específicamente en las PYMES. La transformación digital es un elemento

esencial de la estrategia empresarial (Heavin y Power, 2018), que contribuye a mejorar la capacidad de una empresa para sobrevivir y desarrollarse (Schmid y Pscherer, 2021).

El objetivo principal de este estudio es analizar los efectos de la tecnología y la transformación digital en la resiliencia corporativa, examinar los resultados que se derivan de ellos y explorar el impacto de diferentes variables, como la innovación y el aprendizaje organizacional. La transformación digital, que funciona a través de la conciencia situacional y las decisiones de gestión, crea una relación positiva con la innovación, la creatividad y el desarrollo de la resiliencia organizacional.

Dependiendo de los niveles de innovación (Wang y Ellinger, 2011), el aprendizaje organizacional tiene el potencial de aumentar la agilidad empresarial, especialmente en entornos que hacen un uso intensivo de las tecnologías digitales (Xie et al., 2022). Como este fenómeno se observa a nivel organizacional y a nivel individual, la transformación digital ha provocado cambios significativos en los procesos y roles de gestión de recursos humanos (Schmid y Pscherer, 2021). El desarrollo continuo de las tecnologías digitales ha remodelado la interacción de recursos humanos (RR. HH.) con la información y los datos, lo que ha dado lugar a mejoras significativas en funciones básicas como la contratación, la evaluación del desempeño y el desarrollo de recursos humanos (Mosca, 2020).

Para realizar este análisis, nos centraremos en las PYME de la región andaluza de España, así como en las PYME de Palestina. Las pymes en España se enfrentan a diversos desafíos, como las crecientes expectativas de las partes interesadas, el rápido progreso tecnológico y la creciente conciencia de las consecuencias sociales y ambientales de sus actividades (Troise et al., 2022). Estas demandas subrayan la necesidad de que las PYMES prioricen la innovación, la transformación digital y el emprendimiento, así como un firme compromiso con la responsabilidad social (Chatzistamoulou, 2023). Estas medidas son esenciales para garantizar la resiliencia y la sostenibilidad en medio de los enormes desafíos que enfrenta la provincia de Andalucía en España.

Los factores que afectan a las PYMES en España también afectan a las PYMES en Palestina, donde las empresas enfrentan desafíos adicionales derivados de los recurrentes conflictos bélicos (Dwikat et al., 2023). Se aborda el papel de los recursos humanos en la mejora de la resiliencia organizacional, ya que se ven afectados por eventos negativos. Por lo tanto, es responsabilidad de RR. HH. mantener la resiliencia de las empresas, mejorando la capacidad de los empleados para adaptarse y afrontar las interrupciones.

Con base en lo anterior, se estudia la innovación corporativa, el aprendizaje organizacional, el emprendimiento, la responsabilidad social, los recursos humanos y la transformación digital, y se explora cómo estas variables se integran en la estrategia y su contribución a la mejora de la resiliencia organizacional. Dado que la resiliencia organizacional es un constructo multidimensional que incluye diferentes elementos o recursos, y dado que la tecnología digital es un medio crucial para que las empresas accedan a información y recursos adicionales (Evenseth et al., 2022; Xie et al., 2022), se destaca el beneficio de la tecnología digital para mejorar la resiliencia organizacional.

De hecho, la transformación digital ha desempeñado un papel clave a la hora de facilitar el acceso a recursos externos, lo que ha permitido a las empresas sobrevivir a la reciente pandemia de COVID-19. Aunque las redes empresariales han sido objeto de una extensa investigación en trabajos anteriores, todavía hay un conocimiento limitado sobre cómo se alinean con la resiliencia organizacional.

Por lo tanto, al analizar los datos de encuestas recopilados durante el brote de coronavirus (COVID-19), este estudio explora cómo se puede lograr una resiliencia organizacional superior a nivel empresarial en todas las redes comerciales, abordando así un área relacionada pero aún poco investigada. En este sentido, el trabajo se centrará en las variables tecnológicas que interactúan con el emprendimiento corporativo, buscando incidir en aquellas que puedan tener una interacción más significativa en la resiliencia organizacional.

En definitiva, el objetivo de esta investigación es que las empresas obtengan ventajas competitivas sostenibles a través de un mayor conocimiento que permita la implementación efectiva de las variables analizadas en estos estudios.

### **1.1.3. Relación existente entre resiliencia organizacional y las variables estratégicas de la investigación**

En esta sección, exploramos los fundamentos utilizados en esta tesis, tales como transformación digital, innovación, aprendizaje organizacional, emprendimiento corporativo, responsabilidad social, prácticas de recursos humanos y resiliencia organizacional.

#### ***1.1.3.1. Resiliencia organizacional***

El concepto de “resiliencia” ha sido objeto de amplio debate entre los investigadores, haciendo referencia a la capacidad de una entidad para adaptarse y recuperarse de eventos inesperados. Se destaca la importancia de prepararse proactivamente y anticipar desafíos para

asegurar un aprendizaje continuo y prevenir posibles adversidades futuras. La resiliencia empresarial va más allá de la planificación de continuidad convencional al adoptar un enfoque dinámico y estratégico para mitigar riesgos y proporcionar respuestas inmediatas a interrupciones, adaptándose así a su entorno de riesgo en medio de circunstancias cambiantes. Su objetivo primordial es garantizar que las organizaciones puedan absorber el impacto de las interrupciones sin causar daños significativos a sus operaciones (Ducek, 2019).

La resiliencia organizacional se define como la capacidad de las organizaciones para anticipar, prepararse, responder, adaptarse y recuperarse de cambios e interrupciones repentinos (Hillmann y Guenther, 2020). También se refiere a la capacidad de resistir interrupciones significativas del negocio debido a eventos inesperados o catastróficos, llevando a los sistemas organizacionales más allá de sus límites planificados sin sufrir pérdidas graves (Antunes, 2011, p. 383).

La resiliencia organizacional se interpreta desde tres perspectivas, la primera se centra en la reacción, la resistencia a las perturbaciones y el retorno a su estado natural. En cuanto a la segunda, si no es posible volver al estado anterior a la perturbación, se destaca la mejora en la capacidad de adaptarse y recuperarse de la crisis, manteniendo la continuidad del negocio y tomando medidas correctivas para ajustarse a las condiciones del mercado y a cambios en modelos de negocio (Dahles y Susilowati, 2015). La tercera perspectiva se basa en medidas proactivas y acciones transformadoras que capacitan a las empresas para lidiar con disrupciones repentinas, impulsándolas hacia la innovación y la transformación, lo que facilita su crecimiento y prosperidad a través de la adversidad (Novalia y Malekpour, 2020). La innovación se convierte en una plataforma para la resiliencia organizacional mediante comportamientos de aprendizaje proactivos que facilitan la creación y transferencia de conocimiento dentro de la organización (Yuan et al., 2022).

A pesar de ello, muchas pequeñas y medianas empresas adoptan una postura reactiva en lugar de proactiva para fomentar la resiliencia (Zighan y Ruel, 2021). Este enfoque genera una brecha entre la importancia percibida de la resiliencia y el nivel real de preparación de las empresas ante posibles disrupciones (Kim et al., 2022). No obstante, algunas empresas están adoptando medidas positivas para aumentar su resiliencia al incorporarla en sus estrategias comerciales generales, estableciendo sólidos protocolos de respuesta a emergencias e invirtiendo en soluciones tecnológicas. La confianza en la tecnología digital se presenta como una respuesta innovadora para satisfacer las necesidades de los clientes, mantener la

sostenibilidad de la empresa y asegurar ventajas competitivas, donde la innovación se convierte en un factor clave para responder al cambio, retener clientes y mejorar las carteras de negocios a largo plazo (Damanpour y Gopalakrishnan, 1998; Roberts y Amit, 2003). Asimismo, se destaca la mejora de la eficiencia operativa y la velocidad de movimiento (Kohtamäki et al., 2020).

La resiliencia, la capacidad de anticipar el cambio y una comunicación clara y bien organizada son elementos clave que ayudan a las organizaciones a mantener su ventaja competitiva, fomentar la innovación y mejorar su capacidad de respuesta inmediata a los requisitos de los clientes mediante la velocidad y eficiencia en el desarrollo de nuevos productos o procesos. En este contexto, las nuevas innovaciones se consideran factores esenciales en la resiliencia organizacional (He et al., 2022), ya que permiten a las empresas seguir el ritmo de la evolución del mercado y estimulan la creatividad continua para resolver problemas (Kfir, 2021). Esto se logra al fortalecer la capacidad de la organización para absorber conocimientos y aprender de las crisis, lo que contribuye a aumentar su resiliencia y rendimiento (Rafiki et al., 2021).

Varios investigadores han desarrollado un marco para la resiliencia organizacional que incluye la identificación, respuesta y adaptación a amenazas, así como el aprendizaje para el futuro (Bhamra et al., 2011) y el desarrollo de soluciones (He et al., 2022). Este enfoque implica el desarrollo de diversos recursos organizacionales, como la estructura, las prácticas, la cognición y el comportamiento (Lengnick-Hall et al., 2011). En consecuencia, las prácticas de recursos humanos (RR. HH.) pueden potenciar la resiliencia organizacional al capacitar a los empleados para enfrentar eventos inesperados, desarrollar respuestas rápidas y adaptarse a los cambios (Liu et al., 2019). Asimismo, mejoran la ventaja competitiva de la empresa (Bouaziz y Samawi Hachisha, 2018; De Moura y Amelia Tomei, 2021; Hamouche, 2021), permitiendo que las personas desarrollen y prueben nuevas ideas de manera efectiva y adopten soluciones innovadoras que posicionan mejor a la organización en el nuevo entorno (Lee et al., 2015).

Las organizaciones pueden fortalecer su resiliencia al desarrollar relaciones sólidas con las partes interesadas, desde clientes y empleados hasta proveedores y socios. Aquellas que priorizan el compromiso activo y la comunicación transparente con las partes interesadas están intrínsecamente mejor posicionadas para superar las crisis, generar confianza y fomentar la lealtad (Ho et al., 2022). Por lo tanto, fortalecer la relación con las partes interesadas mejora la reputación de la marca y potencia el sentido de propósito y los valores compartidos en toda la

organización (DiBella et al., 2022). Esta convergencia holística entre responsabilidad social empresarial (RSE) y resiliencia es esencial para las pequeñas y medianas empresas que enfrentan desafíos empresariales contemporáneos complejos. Además, es fundamental reconocer que las iniciativas de RSE, que incluyen esfuerzos como promover el bienestar de los empleados y defender la sostenibilidad ambiental, tienen el potencial no solo de mejorar la reputación de una empresa, sino también de obtener el respaldo continuo de las partes interesadas y aumentar la resiliencia (Low y Bu, 2021). Porque la resiliencia contribuye rápidamente a la toma de decisiones y al desarrollo de alternativas para afrontar el entorno turbulento (Kantur, 2015).

### ***1.1.3.2. Transformación digital***

La transformación digital (TD) es un fenómeno importante en el ámbito empresarial y de gestión, donde la revolución digital está transformando actualmente industrias enteras y el panorama competitivo en general.

Tecnologías digitales como redes sociales, big data, tecnologías de soluciones móviles, la nube, inteligencia artificial (IA), Internet de las cosas (IoT), blockchain de big data, transformación digital, multi digital y redes sociales han contribuido a cambiar las estructuras y estrategias empresariales, así como al desarrollo de nuevos productos y servicios, lo que impacta en el entorno competitivo (Bharadwaj et al., 2013).

Estas tecnologías digitales abarcan distintos niveles, desde productos o servicios digitales, herramientas y equipos digitales hasta plataformas digitales, así como infraestructuras o ecosistemas de emprendimiento digital (Srinivasan y Venkatraman, 2017; Autio et al., 2018). Además, investigaciones posteriores (Zaheer et al., 2019; Elia et al., 2020; Si et al., 2023) subrayan de manera insistente la importancia de la transformación digital.

En la literatura, no existe una definición clara de la transformación digital. Con frecuencia, los investigadores la describen como un cambio organizacional importante impulsado o causado por tecnologías comunes que alteran la forma en que se llevan a cabo los negocios. Aunque se utilizan conceptos como digitalización e innovación digital de manera intercambiable, la consistencia en el uso del término es crucial.

Verhoef et al. (2021) proponen una definición de “transformación digital” como “un cambio en la forma en que una empresa utiliza tecnologías digitales para desarrollar un nuevo modelo de negocio digital que ayuda a crear y asignar más valor a la empresa”. Kraus et al.

(2021) señalan que la transformación digital es un proceso que combina simultáneamente tecnología digital de nuevas formas o con componentes físicos que permiten el cambio social y generan nuevos valores para los usuarios. Vial (2019), lo describió como “un proceso dirigido a mejorar una entidad, realizando cambios significativos en sus características a través de combinaciones de tecnologías de configuración, computación, comunicaciones y conectividad”.

La transformación digital está intrínsecamente vinculada al cambio organizacional impulsado por la adopción de diversas tecnologías digitales, dado que la digitalización ejerce un impacto fundamental en todos los sectores y este impacto irá en aumento en el futuro. Dada su relevancia, se la considera un catalizador del cambio, influyendo en los patrones de creación y consumo de valor, lo que da lugar a modificaciones en modelos de negocios y facilita la aparición de nuevos productos, servicios y procesos empresariales (Wessel et al., 2021). La integración de estas tecnologías digitales permite a las organizaciones potenciar sus ventajas competitivas, aprovechando los recursos existentes y desarrollando nuevas capacidades (Liu et al., 2011).

Estos desarrollos requieren cambios importantes en la estrategia empresarial (Goh y Richards, 1997), ya que las organizaciones se ven obligadas a adaptarse a nuevas formas de hacer las cosas, principalmente relacionadas con la transformación digital que está experimentando el mundo. Es vital para organizaciones públicas y privadas de todos los tamaños, especialmente para aquellas en riesgo de extinción si no se lleva a cabo la transformación digital. Modelos de negocio establecidos se ven desafiados por las cambiantes expectativas y comportamientos de los clientes, así como por nuevos participantes en el mercado con ideas disruptivas de negocios digitales (Verhoef et al., 2019). Por lo tanto, la transformación digital destaca el aspecto del cambio, es decir, la adaptación gestionada, centrándose en cambios en formas de trabajar, roles y ofertas empresariales como resultado de la adopción de tecnologías digitales en una organización o en su entorno operativo para garantizar la creación sostenible de valor (Gimpel y Röglinger, 2015).

Antes de la aparición y propagación de la pandemia de Covid-19, las pequeñas y medianas empresas desarrollaron estrategias de transformación digital para fortalecer sus organizaciones. Por lo tanto, las organizaciones necesitan un cambio radical en la forma en que el equipo directivo hace negocios y piensa, así como una reestructuración para sobrevivir, utilizando nuevas tecnologías digitales para mejorar aspectos clave del negocio, como mejorar la experiencia del cliente, optimizar procesos o crear nuevos modelos de negocio (Warner y



Wäger, 2019). El marco de Transformación Digital de Matt et al. (2015) representa un paso claro hacia un enfoque integral para construir una estrategia de transformación digital.

La adopción de avances tecnológicos no solo contribuye a la resiliencia organizacional, sino que también posiciona a las empresas frente a desafíos y perturbaciones inesperadas, garantizando en última instancia la continuidad del negocio y minimizando pérdidas. Por lo tanto, fomentar la innovación se convierte en un elemento crítico para construir la resiliencia organizacional y garantizar el éxito sostenible en un paisaje empresarial impredecible. El concepto de crear conocimiento en toda la organización, comprender el entorno externo y utilizar este conocimiento para mejorar las habilidades adaptativas es esencial (Jarrahi y Sawyer, 2013). Esto respalda los cuatro esfuerzos de transformación digital según lo delineado por Matt et al. (2015): En primer lugar, el uso de tecnologías se basa en la posición estratégica de la empresa, sus aspiraciones futuras hacia tecnologías novedosas y su capacidad para explotarlas. En segundo lugar, los cambios en la creación de valor se refieren al impacto de la transformación digital en la manera en que la empresa busca aumentar y generar valor. En tercer lugar, las alteraciones estructurales abarcan modificaciones en las operaciones de la empresa, incorporando cambios en estructuras, procesos y conjuntos de habilidades. Por último, los aspectos financieros arrojan luz sobre la urgencia de la acción en respuesta a márgenes decrecientes en el negocio principal de la empresa y la capacidad financiera de la empresa para invertir en iniciativas de transformación digital.

Este marco subraya la naturaleza multifacética de la transformación digital, integrando avances tecnológicos, propuestas de valor redefinidas, reestructuración organizativa y evaluaciones financieras. Es crucial que las organizaciones aborden de manera integral estas dimensiones para navegar con destreza por las complejidades de la era digital.

### ***1.1.3.3. Aprendizaje organizacional***

En la sección anterior, se abordó el concepto de transformación digital, que se refiere a la integración de tecnologías digitales en las estrategias empresariales (Li, 2020). Este proceso contribuye al desarrollo de una cultura de aprendizaje rápido, orientada hacia la adaptación continua a los cambios tecnológicos, y fomenta una mentalidad que valora la experiencia y el aprendizaje a través de los errores. Por lo tanto, el proceso de aprendizaje en el contexto de la transformación digital lleva a las empresas a evaluar la necesidad de esta transformación y determinar el nivel de conocimiento necesario para avanzar en ella (Goh y Richards, 1997).

En general, la transformación digital no solo introduce nuevas herramientas y métodos, sino que transforma toda la cultura de aprendizaje dentro de las organizaciones, mejorando la capacidad de adaptarse y crecer en el dinámico panorama empresarial actual.

El aprendizaje organizacional está asociado con cambios en la cognición, creencias y comportamiento (Guță, 2018), además de cambios en el conocimiento organizacional (Fiol y Lyles, 1985). Sin embargo, no existe una definición generalmente aceptada de aprendizaje organizacional debido a la influencia de diversas perspectivas y disciplinas, lo que conduce a la falta de consenso en su comprensión.

El aprendizaje organizacional depende de la adquisición de conocimientos tanto del entorno interno como externo, y este conocimiento adquirido se considera parte del sistema cognitivo de la organización (Bolívar-Ramos et al., 2012; Chiva et al., 2013). Aprovechar este conocimiento y distribuirlo adecuadamente o retenerlo en la memoria organizacional para uso futuro beneficia a la organización al aumentar sus capacidades y ventaja competitiva (Lee et al., 2017). Martín Rojas et al. (2011) definen el aprendizaje organizacional como “un proceso mediante el cual los miembros de una organización están motivados a esforzarse continuamente hacia nuevos métodos y adquirir y compartir conocimientos que afectan sus interacciones con sus entornos” (Martín Rojas et al., 2011, pp. 985-986).

Basándonos en lo anterior, observamos que las empresas, mediante la creación y retención de nuevos conocimientos y su transmisión entre todas las partes y unidades de la empresa, el aprendizaje organizacional consta de diversas actividades y procedimientos resultantes del diverso proceso de aprendizaje (Argote et al., 2000), o mediante el aprendizaje indirecto de la experiencia de otras unidades (Chiva et al., 2013). Este proceso implica la integración de la adquisición de conocimientos y el cambio organizacional basado en el trabajo y la fuerza laboral. La razón es que el proceso de aprendizaje está estrechamente relacionado con la creación y uso del conocimiento en todas las dimensiones de las organizaciones, desde el nivel individual hasta el nivel organizacional (Foss et al., 2010).

En esta tesis, nos centramos principalmente en estos niveles. En el segundo capítulo, discutimos la relación entre la transformación digital, la innovación y el aprendizaje organizacional, así como el impacto del aprendizaje organizacional en la resiliencia organizacional.

En principio, está claro que el objetivo del aprendizaje organizacional es lograr una ventaja competitiva al recopilar conocimientos de todas las etapas e integrarlos en el proceso de aprendizaje para el aprendizaje efectivo y el crecimiento de los empleados. Este proceso se define como la capacidad de transferir el aprendizaje desde los niveles individual y colectivo hasta la organización, a través de cuatro pasos prácticos: adquirir conocimiento, compartirlo, interpretarlo y retenerlo en la memoria organizacional. Esto permite mantener el rendimiento y la ventaja competitiva, permitiendo que la organización que aprende supere a sus competidores más rápidamente.

Además, se destaca la importancia del aprendizaje para fomentar una cultura de creatividad, experimentación e innovación en las organizaciones (Lemon y Sahota, 2004). A través de las innovaciones en tecnologías de la información y la comunicación, el intercambio y la creación de conocimiento organizacional se han vuelto más efectivos y eficientes. Una organización puede crear una base de conocimientos que puede acumular, y los brotes de conocimiento creados y almacenados pueden analizar este conocimiento con diversos fines (Achdiat et al., 2022).

Aunque los investigadores reconocen el impacto positivo del aprendizaje organizacional en el desempeño empresarial, también es cierto que esta relación media en la innovación. La literatura académica ha encontrado que el aprendizaje organizacional sirve como precursor de la innovación (Werlang y Rossetto, 2019), sostienen que la innovación es el resultado de un proceso de aprendizaje. Otros investigadores señalan que el aprendizaje organizacional en sí mismo, sus resultados y el conocimiento organizacional permiten mejorar la innovación a través de la adquisición, compartición, desarrollo y transferencia de conocimiento (Huber, 1991; Naqshbandi et al., 2022).

A medida que aumentan las demandas del entorno organizacional y los cambios rápidos resultantes de la aparición de nuevas tecnologías, la organización debe desarrollar nuevos mecanismos para adaptarse a las nuevas condiciones. A través de la adaptación, la organización crea conocimiento organizacional que puede llevar al desarrollo de competitividad a largo plazo.

En este sentido, Ramos et al. (2021) destaca que el aprendizaje es una de las habilidades que una organización debe poseer para ser flexible, junto con la capacidad de responder a la realidad y abordar cuestiones críticas, mediante habilidades de monitoreo y anticipación, que se identifican y desarrollan a través de la gestión del conocimiento (Li et al., 2022). La absorción y

transferencia de conocimientos y el aprendizaje de crisis y experiencias de otros mejoran la resiliencia y el rendimiento organizacional (Karanika-Murray et al., 2023).

#### ***1.1.3.4. Innovación empresarial***

En la literatura, no se encuentra una definición única y consensuada de innovación. El concepto de innovación empresarial es amplio y diverso, aunque la mayoría de las definiciones comparten elementos comunes como novedad, valor e implementación (Varadarajan, 2018). La novedad se refiere a la originalidad de una idea o producto, mientras que el valor destaca el impacto positivo de estos servicios o ideas en individuos, organizaciones o la sociedad. La implementación enfatiza la exitosa introducción y uso de la innovación. Schumpeter (1934) inicialmente subrayó la novedad en su concepto de innovación, definiéndola como la introducción de un nuevo producto, método de producción, penetración en el mercado, búsqueda de nuevas fuentes de abastecimiento o creación de un nuevo proyecto.

Es importante diferenciar entre los conceptos de invención e innovación, ya que la invención se considera uno de los factores fundamentales detrás de muchas innovaciones (Amabile, 1983). Aunque la invención es crucial, no es sinónimo de innovación: las invenciones no necesariamente deben llevar a aplicaciones prácticas, a diferencia de la innovación, que debe ser ejecutable y exitosa en el mercado (Denning y Dunham, 2011), y que tiene la posibilidad de crear valor económico a partir de ella. Desde esta perspectiva, la innovación también se caracteriza por la difusión y la adopción (Kimberly y Evanisko, 1981).

Por ende, el término innovación describe cambios en la economía derivados del uso de nuevas tecnologías y procesos de producción, incluyendo el desarrollo de bienes, servicios, mercados, métodos de fabricación, fuentes de suministro y nuevos modelos de negocio (Damanpour y Schneider, 2006). Drucker (1985) afirmó que “la innovación es la herramienta que define a los emprendedores y el medio por el cual explotan el cambio como una oportunidad para un negocio o servicio diferente”. En este contexto, la innovación puede ser de producto, servicio o proceso, ya sea radical o incremental. En ambos casos, la innovación se manifiesta en dos niveles: mejoras y nuevas tendencias. Las mejoras comprenden soluciones diseñadas para adaptarse mejor a las definiciones de valor existentes, resolver problemas existentes o crear nuevas tendencias (Verganti y Shani, 2016)

Además, la innovación puede ser técnica, administrativa o tecnológica. Las innovaciones técnicas se centran en cambios en productos, servicios y procesos tecnológicos y actividades

laborales relacionadas con ellos. La innovación administrativa, por otro lado, se relaciona con estructuras organizativas, sistemas administrativos, procesos, prácticas y tecnologías, abordando aspectos relacionados con las personas, las relaciones y los métodos de comunicación dentro de la empresa y su entorno (Damanpour y Evan, 1984). La innovación tecnológica se vincula con la introducción de nuevos dispositivos, aplicaciones de software o procesos de fabricación, y los procesos tecnológicos e iterativos que conducen a la comercialización exitosa de la innovación tecnológica (Teece 1986).

En el segundo capítulo de este trabajo, se abordó la innovación técnica y tecnológica, centrándonos principalmente en la elección estratégica de la innovación dentro de la empresa y en una comprensión clara de los diferentes tipos de innovación, sus características, los factores que influyen y los posibles impactos en los elementos organizacionales (Ettlie et al., 1984). En un entorno empresarial cada vez más competitivo, la innovación se reconoce como un factor clave para las empresas que buscan crear valor y ventajas competitivas sostenibles (Wang et al., 2012). Las tecnologías digitales han provocado cambios en el entorno empresarial, ayudando a crear nuevas oportunidades e iniciativas innovadoras (Díaz-Chao et al., 2015). Por tanto, contribuye a la creación de nuevos productos, servicios y procesos de negocio (Bharadwaj et al., 2013), además de desarrollar cadenas de suministro, eficiencias operativas y transferir conocimientos (Westerman et al., 2006).

El proceso de aprendizaje implica la creación de conocimiento, su transferencia y su mantenimiento en la empresa. De este modo, este conocimiento puede utilizarse en el desarrollo de productos que satisfacen las necesidades del mercado. Este proceso conduce a la generación continua de nuevos conocimientos, requiriendo un proceso constante de aprendizaje y gestión del conocimiento para desarrollar y difundir estas innovaciones (Brockman, 2006).

Basándonos en lo anterior, la innovación tiene sus raíces en la integración, síntesis e intercambio de conocimientos entre diferentes unidades dentro de la empresa, potenciando la creatividad como base para resultados innovadores (Hurley y Hult, 1998; Shipton et al., 2017). La fuerza impulsora detrás de la innovación es la búsqueda de un mejor desempeño y efectividad, logrados mediante la generación o adopción de soluciones innovadoras (Rosenbusch et al., 2011).

En un contexto empresarial, la innovación se presenta como una herramienta fundamental para capacitar a las empresas y mantener su desempeño, especialmente ante mercados dinámicos y turbulentos, competencia intensa y preferencias cambiantes de los clientes (Dávila

et al., 2009). Las empresas que priorizan la innovación obtienen una ventaja competitiva y a menudo experimentan un fuerte crecimiento de las ganancias y del desempeño general. Por lo tanto, la innovación se considera una herramienta para sobrevivir en mercados turbulentos, ya que ayuda a producir bienes y servicios adecuados para nuevos mercados. Nambisan et al. (2017) destacaron que existen vínculos entre la evolución de bienes y servicios, modelos de negocio y desarrollo. En consecuencia, estas nuevas innovaciones se presentan como soluciones a situaciones difíciles y contribuyen a mantener el desempeño general de la organización (Castellacci y Lie, 2015). Esto sugiere que la innovación es un factor clave en la resiliencia organizacional (Davila et al., 2009).

#### ***1.1.3.5. Exploración de la orientación emprendedora y el concepto de emprendimiento corporativo***

La presente sección busca analizar en profundidad la orientación emprendedora y el concepto de emprendimiento corporativo, destacando sus dimensiones fundamentales y su impacto en la resiliencia organizacional.

##### ***1.1.3.5.1. Orientación emprendedora (OE)***

La orientación emprendedora (OE) se define por la disposición a innovar, asumir riesgos, participar en acciones autodirigidas y buscar proactivamente nuevas oportunidades de mercado (Lumpkin y Dess, 1996; Wiklund y Shepherd, 2005). Las primeras investigaciones, basadas en el trabajo de Miller (1983), se enfocaron en tres dimensiones: innovación, tolerancia al riesgo y proactividad. Estas dimensiones fueron adoptadas posteriormente en estudios subsiguientes (Covin y Slevin 1989; Lumpkin y Dess 1996; Kreiser et al. 2002; Tarabishy et al., 2005). Dimensiones adicionales de agresión competitiva e independencia también se han incorporado recientemente (Lumpkin y Dess, 1996). La innovación implica la introducción de nuevos productos y servicios competitivos, la proactividad significa anticipar y buscar nuevas oportunidades, y la asunción de riesgos se relaciona con asignar recursos, con la posibilidad de fracaso y resultados inciertos (Lumpkin y Dess, 2001).

En este estudio, la orientación empresarial, enfocada en las dimensiones de innovación, proactividad y asunción de riesgos, se aborda en detalle en el tercer capítulo. Estas dimensiones son consideradas fundamentales para el enfoque estratégico de una empresa (Lumpkin y Dess, 1996). La adopción de tecnologías digitales e integrarlas en la estrategia organizativa mejora la orientación emprendedora (Yunus et al., 2018). La utilización de tecnologías digitales para crear

valor se alinea con el comportamiento innovador y de asunción de riesgos de la orientación empresarial. Las tecnologías digitales ofrecen amplias oportunidades para las empresas (Yunus et al., 2018), y la digitalización puede influir en cómo se moldea la orientación emprendedora para lograr un alto rendimiento mediante la inversión en tecnologías apropiadas (Lumpkin y Dess, 1996).

Desde una perspectiva empírica, se ha demostrado que la orientación emprendedora tiene un impacto positivo a largo plazo en el desempeño (Khedhaouria et al., 2020). Las empresas orientadas al emprendimiento tienen una mayor capacidad para adaptarse a las incertidumbres y desafíos del entorno competitivo (Lumpkin y Dess, 1996). Este enfoque proactivo mejora la resiliencia organizacional, permitiendo a las empresas mantenerse por delante de la competencia (Hult et al., 2004; Shipton et al., 2017). La orientación empresarial es esencial para desarrollar la resiliencia organizacional al abordar proactivamente los cambios y perturbaciones ambientales (Sturm et al., 2023). Mejora la resiliencia, la adaptabilidad, la asunción de riesgos y la innovación, permitiendo a las empresas anticipar y responder eficazmente a los desafíos.

Este enfoque impulsado por la innovación ayuda a las empresas a seguir siendo competitivas, identificar nuevas oportunidades de crecimiento y encontrar soluciones alternativas durante las interrupciones o crisis, lo que lleva a una recuperación más rápida. La adaptabilidad y la innovación, fomentadas por la orientación empresarial, contribuyen significativamente a la resiliencia organizacional (Zighan et al., 2021).

#### ***1.1.3.5.2. Emprendimiento corporativo (CE)***

El concepto de emprendimiento corporativo ha sido explorado por diversos académicos (Tseng y Tseng, 2019; Urbaniec y Żur, 2020; Edwards et al., 2023). Jones y Butler (1992) definen el emprendimiento corporativo como “el proceso mediante el cual las empresas descubren oportunidades y organizan transacciones creativas entre factores de producción para crear plusvalor”, implicando la expansión del campo de competencia entre empresas y la creación de oportunidades mediante nuevas combinaciones de recursos generados internamente (Covin y Slevin, 1991). Zahra (1991) destaca que el emprendimiento corporativo puede manifestarse en actividades formales o informales destinadas a crear nuevos negocios en empresas establecidas a través de innovaciones en productos, procesos y desarrollos de mercado. Estas actividades pueden tener lugar a nivel de empresa, división, función o proyecto,

con el objetivo unificado de mejorar la posición competitiva y el desempeño financiero de la empresa.

En el tercer capítulo de esta tesis, se enfoca en cuatro aspectos del emprendimiento corporativo: la búsqueda de nuevos negocios, la innovación, la autorrenovación y los enfoques proactivos. Estas dimensiones, identificadas previamente en la literatura (Zahra, 1993; Knight, 1997; Martín-Rojas et al., 2017; Nambisan et al., 2019), contribuyen al análisis de los esfuerzos empresariales en el campo del emprendimiento, ya sea una actividad formal o informal a nivel empresarial, centrada en descubrir y perseguir nuevas oportunidades de negocio mediante la innovación estratégica y la aventura corporativa (Ginsberg y Guth, 1990).

La tecnología digital puede potenciar el emprendimiento corporativo al proporcionar a los empresarios mayor resiliencia y agilidad en sus operaciones comerciales. Al ampliar la base de clientes a través de plataformas de comercio electrónico, la tecnología digital aumenta el alcance en el mercado y los ingresos por ventas (Shemi y Procter, 2018). Al promover una cultura de innovación, asunción de riesgos y responsabilidad social y ambiental, el emprendimiento corporativo puede estimular a las empresas a desarrollar e implementar estrategias proactivas de responsabilidad social empresarial (RSE) que generen valor tanto para la empresa como para sus partes interesadas, manteniendo al mismo tiempo sus capacidades existentes y recursos (Shepherd y Patzelt, 2011). Una empresa centrada en el emprendimiento corporativo busca asociarse con organizaciones sociales y ambientales para desarrollar nuevos productos o servicios que aborden cuestiones sociales y ambientales críticas. Además, puede invertir en prácticas y tecnologías sostenibles para reducir su impacto ambiental y promover prácticas comerciales responsables (Bacinello et al., 2020).

Dado que el emprendimiento corporativo es un tema bien establecido y en constante crecimiento en la investigación en gestión y emprendimiento, el reciente enfoque en las PYMES es particularmente oportuno y relevante. Esto se debe a que el desafío clave para las PYMES, a medida que buscan oportunidades de crecimiento en la nueva realidad económica global, radica en la adaptación y renovación constantes (Antončić e Hisrich, 2001).

La resiliencia organizacional permite a las empresas abordar de manera proactiva los cambios en la demanda y las disrupciones del mercado, aprovechando y mejorando sus capacidades para superar desafíos adversos (Williams et al., 2019). Esto implica desarrollar un nuevo conjunto de capacidades alineadas con las tendencias emergentes y permitir a las organizaciones responder de manera efectiva a disrupciones inesperadas (Ortiz-de-Mandojana



y Bansal, 2015). La capacidad de las empresas para buscar oportunidades y soluciones más allá de sus capacidades actuales, junto con una política de innovación activa, encarna su capacidad para innovar. Este enfoque proactivo, caracterizado por la creación de nuevas estrategias y sistemas, contribuye al desarrollo de la resiliencia organizacional, especialmente en circunstancias repentinas, inesperadas y turbulentas (Dess y Lumpkin, 2005).

La importancia de la resiliencia organizacional para ayudar a las empresas a prosperar en entornos desafiantes se ha vuelto evidente, especialmente en el escenario post-Covid-19. Las empresas mejoran la resiliencia mediante posiciones estratégicas efectivas, evaluación cuidadosa de las condiciones ambientales, participación en la autorrenovación, desarrollo de nuevas capacidades y creación de oportunidades. Estos esfuerzos permiten a las organizaciones no solo adaptarse al cambio, sino también sobrevivir y lograr un desempeño organizacional sostenible (Lengnick-Hall et al., 2011). La reciente disrupción provocada por el Coronavirus (COVID-19) ha obligado a las organizaciones a enfrentar circunstancias difíciles para ir. En respuesta, las organizaciones han demostrado una importante conciencia de sí mismas y autoeficacia, adaptándose al cambio, renovándose y superando obstáculos (Bullough y Renko, 2013; Renko et al., 2020). La adaptabilidad observada puede deberse a una resiliencia preexistente dentro de las organizaciones, junto con nuevos desafíos que han requerido cambios y modificaciones en sus sistemas operativos en respuesta a amenazas emergentes en sus mercados. Estos desafíos han actuado como catalizadores para el desarrollo de nuevos métodos de aprendizaje y capacidades empresariales, contribuyendo a la resiliencia y fortaleza de las organizaciones (Hedner et al., 2011).

#### ***1.1.3.6. Responsabilidad social corporativa (RSC)***

En tiempos recientes, la Responsabilidad Social Corporativa (RSC) ha adquirido una prominencia significativa en el ámbito empresarial, siendo considerada como acciones voluntarias orientadas a mejorar condiciones sociales o ambientales y reconocida como impulsora de programas de empoderamiento social (Mackey et al., 2014). La RSE se refiere al compromiso empresarial de evaluar el impacto de sus operaciones en la sociedad y el medio ambiente, evaluado a través del Triple Resultado (TBL) que abarca desempeño económico, ambiental y social. Este concepto, introducido por John Elkington (1998), ha sido ampliamente aceptado como marco para la gestión y presentación de informes de sostenibilidad. A pesar de cierta falta de coherencia en la definición y aplicación del TBL, los investigadores coinciden en la importancia de considerar tanto los impactos sociales y ambientales como los económicos.

La RSE implica el uso integral de recursos y actividades organizacionales para lograr beneficios ambientales (Porter y Kramer, 2007) y se integra en los valores éticos de las empresas, abarcando diversas obligaciones como la búsqueda de ganancias, compromisos sociales y éticos, crecimiento y valores éticos (O’Brocháin et al., 2015; Freund et al., 2023). La RSE, considerada como un motor de progreso social, implica aplicar estratégicamente recursos, conocimientos y valores para el beneficio de la sociedad (Porter y Kramer, 2007), siendo fundamental para la estabilidad, crecimiento y desempeño sostenible a largo plazo.

Las pequeñas y medianas empresas (PYME) pueden emplear la Transformación Digital (TD) para alcanzar objetivos de RSE y desarrollar prácticas empresariales más sostenibles y socialmente responsables. La TD permite la recopilación y análisis de datos relacionados con cuestiones de RSE (Broadstock et al., 2020) y facilita el desarrollo de capacidades de captura, permitiendo la colaboración con partes interesadas y la respuesta a desafíos sociales y ambientales en tiempo real (Balogun et al., 2020). Asimismo, el desarrollo de capacidades transformacionales mediante la TD fomenta la innovación y la creación de productos y servicios que abordan desafíos sociales y ambientales (Bharadwaj et al., 2013), asegurando que la digitalización se utiliza estratégicamente para cumplir los objetivos de RSE y TBL.

El emprendimiento corporativo (CE) desempeña un papel crucial en la promoción de la RSE al facilitar el desarrollo de innovaciones sociales y ambientales, incluyendo productos y servicios sostenibles. Esto mejora la capacidad de una empresa para detectar y responder a oportunidades de mercado (Frare y Beuren, 2021).

En resumen, la RSE juega un papel vital en el desarrollo de modelos de negocios sostenibles que contribuyen a la resiliencia organizacional (RO). Esto se logra mediante la mejora de la participación de las partes interesadas, la eficiencia de los recursos, la construcción de reputación y marca, la gestión efectiva de riesgos y la promoción de la innovación (Sajko et al., 2020; Mattera et al., 2021). Además, las empresas con programas de RSE eficaces son fundamentales para la gestión de crisis, ya que están mejor preparadas para responder y recuperarse de situaciones críticas (Adekola y Clelland, 2019). Una cultura sólida de sostenibilidad, derivada de iniciativas de RSE, contribuye a la resiliencia organizacional, al potenciar la innovación, la adaptabilidad y la asunción de riesgos (Linnenluecke y Griffiths, 2010). Finalmente, las iniciativas de RSE, como el desarrollo de nuevos productos o servicios alineados con las necesidades del consumidor, permiten a las empresas diversificar sus fuentes

de ingresos, reduciendo así la dependencia de mercados tradicionales y fortaleciendo su resiliencia frente a las fluctuaciones del mercado (Carayannis et al., 2014).

### ***1.1.3.7. Prácticas de recursos humanos***

La gestión de recursos humanos abarca principios sólidos y aplicaciones relacionadas con las responsabilidades de la alta dirección en cuanto a “recursos humanos”. Esto incluye la planificación de recursos humanos, análisis de puestos, proceso de contratación, selección, orientación, colocación, evaluación de puestos, formación de la fuerza laboral y relaciones laborales (Miranda y Fernando, 2020).

Estos recursos humanos comprenden principios, prácticas y sistemas que influyen en los comportamientos, actitudes y desempeño de los empleados (Kehoe y Wright, 2010). Se definen como el conjunto de habilidades y actividades relacionadas con el desempeño de los empleados que ayudan a una empresa a alcanzar sus objetivos, incluida la planificación de recursos humanos, el reclutamiento, la capacitación, el análisis del puesto y la compensación (Chowdhury, 2013).

Estas prácticas contribuyen al crecimiento de las capacidades, conocimientos y destrezas de los empleados, así como a su satisfacción laboral, lo que a su vez contribuye al logro de objetivos individuales y organizacionales y agrega valor a la organización (Minbaeva, 2005). La gestión de recursos humanos puede vincularse a estrategias empresariales para garantizar que las organizaciones cuenten con los empleados competentes, comprometidos, dedicados y motivados necesarios para mantener una ventaja competitiva sostenible (Armstrong y Taylor, 2020).

Las prácticas de recursos humanos desempeñan un papel crucial en la mejora del desempeño y la productividad de las organizaciones, ya que los recursos humanos son reconocidos como valiosos activos intangibles que contribuyen a la ventaja competitiva (Lado y Wilson, 1994; Catalfo, 2015). Se definen como un conjunto de habilidades y actividades relacionadas con el desempeño de los empleados, apoyando el logro de los objetivos organizacionales (Boxall, 2012; Chowdhury, 2013). Estas prácticas incluyen reclutamiento, capacitación, análisis de puestos y sistemas de recompensa, mejorando las capacidades, el conocimiento y la satisfacción laboral de los empleados, contribuyendo así al logro de objetivos individuales y organizacionales (Minbaeva, 2005).

Vincular la gestión de recursos humanos con las estrategias empresariales garantiza que las organizaciones cuenten con empleados capacitados, comprometidos y motivados, lo que mejora la ventaja competitiva sostenible (Armstrong y Taylor, 2020). El análisis de recursos humanos, que implica recopilar y analizar datos relacionados con las prácticas de recursos humanos, ayuda a desarrollar soluciones a los desafíos organizacionales y a mejorar la resiliencia organizacional para enfrentar interrupciones y crisis (Anarelli y Nonino, 2016; Lengnick-Hall et al., 2011).

Para garantizar la resiliencia organizacional, los esfuerzos específicos de planificación de recursos humanos deben priorizar la resiliencia de los empleados, alineando los objetivos de contratación con las necesidades organizacionales actuales y futuras (Bardoel et al., 2014). Sin embargo, es importante darse cuenta de que la literatura a menudo se centra en el papel de los planes de respuesta humanitaria en el desarrollo de la resiliencia del personal, con atención limitada a los sistemas de trabajo de alto rendimiento y al capital psicológico para mejorar la resiliencia individual y del personal (Branicki et al., 2016; Flanders et al., 2020).

#### ***1.1.4. Interés de la investigación***

La presente tesis doctoral aborda cuatro investigaciones independientes que, a pesar de su autonomía, comparten una interconexión y unidad. Su objetivo principal es mejorar la resiliencia organizacional. En el segundo capítulo, se enfoca en la transformación digital de las pequeñas y medianas empresas, resaltando la importancia de mejorar su capacidad de aprendizaje e innovación para elevar su resiliencia. El tercer capítulo realiza una revisión narrativa centrada en la relación entre variables debido a la limitación de resultados para realizar un metaanálisis sistemático.

En el Capítulo Cuatro, se inicia con la inversión en infraestructura de tecnología digital y la creación de capacidades dinámicas. Esto permite a las empresas alcanzar una ventaja competitiva sostenible, mejorando sus orientaciones en emprendimiento y responsabilidad social corporativa. Aunque estos temas pueden parecer distintos, el capítulo proporciona una comprensión de la compleja interacción entre tecnologías digitales, emprendimiento y su papel en la mejora de la resiliencia organizacional a través de la responsabilidad social.

En el quinto capítulo, se analizan los recursos humanos como activos intangibles cruciales para mejorar la resiliencia organizacional. Se destaca la importancia de desarrollar capacidades cognitivas, conductuales y contextuales a nivel organizacional y de recursos

humanos. La resiliencia organizacional se presenta como clave para enfrentar eventos inesperados y adaptarse a cambios, mejorando la ventaja competitiva.

1. El trabajo aborda temas actuales y explora la conexión entre el uso de tecnologías digitales y la mejora de la resiliencia organizacional. La transformación digital se manifiesta en la modificación de información, gestión y recursos, remodelando la naturaleza de las organizaciones. La gestión debe adoptar estrategias que fomenten la innovación e inversión, inspirando a los empleados a aceptar nuevos cambios y estrategias tecnológicas.

En cuanto a la metodología para probar estadísticamente las hipótesis propuestas, se destacan algunas cuestiones de interés:

A) En el caso del segundo y cuarto capítulo, la muestra fue seleccionada de dos bases de datos SABI. Se optó por utilizar a los directores ejecutivos como informantes clave, ya que investigaciones previas han demostrado que los datos proporcionados por estos directivos son tan confiables y válidos como los recabados de múltiples fuentes, dada su comprensión integral de sus empresas, operaciones y planes relacionados con sistemas de información y medios de comunicación. La lista de directores generales se extrajo de la Consejería de Economía, Innovación y Ciencia de la Junta de Andalucía y del Ministerio de Ciencia e Investigación de España, seleccionando aleatoriamente 376 empresas [ver Tabla 1], a las cuales se les administraron los cuestionarios. Los correos electrónicos y las llamadas se realizaron entre febrero y septiembre de 2020, logrando un total de 259 respuestas (tasa de respuesta del 68,88%).

B) En la investigación del Capítulo 3, se llevó a cabo una revisión narrativa centrada en hallazgos anteriores, explorando direcciones de investigación futuras. Para identificar estudios anteriores, se realizaron búsquedas en la base de datos Web of Science utilizando los parámetros de búsqueda: EO = [(“orientación al emprendimiento” o “empresas emprendedoras”) y (“tecnologías digitales” o “transformación digital” o “nuevas tecnologías” o “nueva tecnología”) y (resiliencia organizacional o “recuperación del desempeño” o “enfrentar la disrupción” o “resiliencia de la estrategia empresarial”). Se seleccionaron estudios que examinaron o modelaron asociaciones entre tecnologías digitales y orientación empresarial para mejorar el entorno empresarial organizacional. La selección se realizó manualmente,

extrayendo estudios previos de las listas de referencias de los estudios utilizados en este trabajo.

C) Para la investigación del Capítulo 5, se seleccionaron pequeñas y medianas empresas palestinas, consideradas como el motor de la economía palestina. Estas representan el 90% de las empresas palestinas y constituyen aproximadamente el 60% del empleo total en el sector privado palestino. Se eligieron aleatoriamente 500 empresas a partir de las 12,243 registradas en la base de datos del Ministerio de Economía Nacional. Se realizaron correos electrónicos y llamadas durante el periodo de septiembre a diciembre de 2022, obteniendo respuestas de un total de 124 empresas (tasa de respuesta del 24,8%).

2. En cuanto al método estadístico empleado, en los capítulos segundo, cuarto y quinto se utilizó el análisis de regresión. Este método permite prever valores futuros y determinar relaciones causales entre variables, ofreciendo una concordancia efectiva entre los aspectos teóricos y experimentales.

3. La metodología estadística se desarrolló utilizando el programa estadístico SPSS 28 e IBM SPSS AMOS 28 GRAPHICS para analizar las ecuaciones estructurales.

4. Todas las preguntas de los cuestionarios se tomaron de estudios previos validados.

5. Los cuatro artículos desarrollados en los capítulos de investigación contienen trabajos empíricos con un enfoque teórico y empresarial, ya que cada uno de ellos propone implicaciones teóricas y prácticas para los directivos de las empresas.

## ***1.2. OBJETIVOS DE LA INVESTIGACIÓN***

El propósito fundamental de esta tesis doctoral es obtener una comprensión integral de los efectos de la tecnología digital en la resiliencia de las organizaciones, así como de las complejas interacciones y resultados derivados de dicho impacto. Aunque los cuatro artículos presentados están vinculados en su estudio de la resiliencia organizacional, cada uno mantiene su contribución independiente.

En los capítulos segundo y tercero, se examina el factor tecnológico, abordando el uso de tecnologías digitales y la transformación digital, y su influencia en diversas variables como la innovación, el aprendizaje organizacional y la orientación emprendedora. Posteriormente, en el Capítulo 4, se investiga la responsabilidad social y la transición hacia un ecosistema

emprendedor basado en el emprendimiento corporativo y la implementación de tecnologías digitales. A continuación, se detallan algunos de los objetivos que se buscan alcanzar con el desarrollo de esta tesis:

- Analizar el papel de la tecnología digital y su aplicación en el proceso de transformación para potenciar las capacidades dinámicas de las empresas.
- Identificar cómo la adopción de tecnologías digitales en las organizaciones contribuye a fortalecer su capacidad de adaptación y resistencia frente a situaciones de incertidumbre.
- Estudiar el impacto del uso de tecnologías digitales en el aprendizaje organizacional.
- Investigar el impacto del uso de tecnologías digitales en la innovación.
- Aprender a utilizar la tecnología digital como un recurso dinámico y una capacidad que mejora el espíritu empresarial.
- Explicar el papel de las innovaciones, el aprendizaje organizacional y la orientación empresarial en la resiliencia organizacional.
- Explicar el papel de las prácticas de recursos humanos en la mejora de la resiliencia organizacional.
- Evaluar el impacto de la tecnología digital en las organizaciones que enfrentan crisis como la COVID-19, así como estudiar el papel de la responsabilidad social corporativa en la mejora de su resiliencia.

### ***1.3. ESTRUCTURA DEL TRABAJO***

Este trabajo de investigación consta de seis capítulos. Además de este capítulo introductorio, se incluyen los capítulos 2, 3, 4 y 5, los cuales son artículos de investigación, seguidos por un capítulo final que aborda las conclusiones, implicaciones teóricas y administrativas, así como los límites de la investigación y las direcciones futuras.

Los capítulos dos y tres se centran en investigar el impacto de las tecnologías digitales en el desarrollo de capacidades dinámicas y resiliencia organizacional en las empresas. En el Capítulo 4, se examina el efecto de la responsabilidad social digital y el emprendimiento

corporativo en la resiliencia organizacional. Por otro lado, el Capítulo Cinco se dedica a estudiar las prácticas de recursos humanos, ya que el factor humano es considerado uno de los activos más cruciales de las empresas, y estas prácticas pueden mejorar la resiliencia organizacional al capacitar a los empleados para enfrentar eventos imprevistos, responder de manera ágil y adaptarse a cambios.

Este trabajo analiza el impacto del uso de tecnologías digitales en el desarrollo del aprendizaje organizacional, promoviendo un enfoque dinámico en la transferencia y aplicación del conocimiento en toda la empresa mediante un proceso continuo de aprendizaje. Asimismo, se aborda el impacto de estas tecnologías en la innovación, señalando cómo las empresas pueden adquirir, asimilar y explotar conocimientos para generar innovaciones.

En esta tesis, se busca verificar empíricamente cómo la aplicación de tecnologías digitales puede constituir una respuesta innovadora para satisfacer las necesidades de los clientes y mantener la sostenibilidad y ventajas competitivas de la empresa. A medida que las empresas innovan para enfrentar el cambio, retener clientes, satisfacer sus necesidades y mejorar las carteras de negocios, se busca unificar un plan de negocio a largo plazo.

Se eligieron específicamente las pequeñas y medianas empresas como objeto de estudio, dado que constituyen la columna vertebral de la economía global y contribuyen a generar oportunidades de empleo y fomentar el crecimiento económico. En relación con la provincia de Andalucía, en España, se destaca por su sólida y creciente capacidad tecnológica en el sector, respaldada por diversas iniciativas y programas orientados a fomentar la innovación y el emprendimiento. Andalucía es considerada una de las mejores regiones de España para invertir en investigación y desarrollo, con un aumento significativo de las inversiones en 2020, según datos de la Junta de Andalucía (Asensio, 2022).

En el caso de Palestina, se caracteriza por numerosas perturbaciones y restricciones que afectan al elemento humano, siendo este el más perjudicado en situaciones de incertidumbre. Por ende, las prácticas de recursos humanos deben orientarse a mejorar la resiliencia de las empresas en este contexto.

La muestra de empresas fue obtenida de las bases de datos SABI durante el segundo y cuarto semestre. Nuestra estrategia de muestreo se basó en un enfoque estratificado, seleccionando 259 PYMES en la provincia de Andalucía, España, durante el periodo de febrero a septiembre de 2020, coincidiendo con las primeras etapas de la crisis de COVID-19. Durante



este periodo, las empresas se esforzaron por sobrevivir y respaldar a sus comunidades. Muchas utilizaron las redes sociales para comunicarse con sus clientes y transformaron sus operaciones con el apoyo de tecnologías digitales.

La recopilación de datos primarios para este estudio se llevó a cabo mediante un cuestionario de encuesta que fue sometido a un proceso exhaustivo de revisión. Gerentes generales, académicos y consultores con experiencia en la complejidad, sistemas de información y redes sociales revisaron las medidas de la encuesta en cuanto a contenido, redacción y comprensibilidad. Basándonos en sus observaciones, el cuestionario fue revisado para garantizar su validez y confiabilidad. Se probó con una muestra de 376 participantes, obteniendo 259 respuestas, lo que resultó en una tasa de respuesta del 68,88% (ver Tabla 1). Los propietarios de empresas representaron el 57,1% de la muestra como informantes principales, dada su comprensión integral de sus empresas, negocios y planes relacionados con sistemas de información y redes sociales para lograr objetivos empresariales y mejorar el desempeño (Baer y Fresé, 2002).

En el quinto capítulo, la muestra se extrajo de la base de datos del Ministerio de Economía Nacional palestino. Los participantes incluyeron gerentes (55%), gerentes de medio campo (34%), gerentes de alto nivel (17%) y empleados (23%). La proporción de participantes con posgrado fue del 65%, con un nivel educativo medio del 55%, y solo el 4% tenía formación básica. La encuesta generó 124 cuestionarios de los 500 distribuidos, con una tasa de respuesta del 24,8%.

En ambas muestras anteriores, se proporcionó a los participantes un informe resumiendo los resultados del estudio para aumentar la tasa de respuesta. Todas las respuestas individuales se mantuvieron confidenciales, y la información se presentó de manera agregada para minimizar cualquier sesgo de deseabilidad. Se evaluó el sesgo de falta de respuesta mediante la examinación de las posibles diferencias entre los que respondieron temprano y tarde, y los resultados indicaron que no había diferencias significativas, lo que sugiere que el sesgo de falta de respuesta no afectó significativamente los resultados del estudio.

Hasta el momento, la investigación que analiza el impacto de las tecnologías digitales y las emplea como una capacidad dinámica y nuevo recurso para mejorar la ventaja competitiva y la resiliencia organizacional ha sido limitada. La principal contribución de este artículo radica en llenar los vacíos existentes en la literatura sobre tecnologías digitales, desarrollando un marco conceptual para explicar cómo estas tecnologías ayudan a las empresas a beneficiarse de

flujos de conocimiento, innovaciones, emprendimiento, responsabilidad social y recursos humanos.

Además, la investigación refleja de manera empírica cómo las tecnologías digitales contribuyen a mejorar los procesos de transferencia y adquisición de conocimiento, así como a aprovechar la innovación en la empresa para mejorar la resiliencia organizacional. El Capítulo Dos tiene como objetivo analizar cómo el uso de las tecnologías digitales y la transformación digital mejora tanto el aprendizaje como la innovación organizacional, y cómo ambos contribuyen al respaldo de la resiliencia organizacional. También examina el papel del aprendizaje organizacional como impulsor de la innovación.

En el Capítulo Cuatro, la investigación se centra en examinar si la responsabilidad social contribuye a mejorar la resiliencia organizacional. Inicialmente, se estudia el impacto de las tecnologías digitales y el emprendimiento corporativo en la responsabilidad social corporativa. La originalidad de esta investigación radica en analizar los complejos mecanismos a través de los cuales estas dinámicas colectivamente dan forma y mejoran la resiliencia. Existe un claro vacío en la literatura existente, ya que la interacción entre las tecnologías digitales, el emprendimiento corporativo y su impacto colectivo en la RSE sigue en gran medida inexplorada. Igualmente desconocida es la interrelación por la cual la RSE, a su vez, impacta la resiliencia organizacional.

En el marco teórico, inicialmente nos basamos en dos teorías básicas: la Teoría de la Capacidad Dinámica (DCT) y la visión estática basada en recursos (RBV). La DCT emerge como una destacada metodología de gestión estratégica, explicando cómo las organizaciones logran y mantienen una ventaja competitiva en un contexto dinámico. Estos marcos han impactado indeleblemente la literatura sobre gestión estratégica, proporcionando una comprensión más profunda de cómo las organizaciones logran y mantienen el dominio competitivo.

En cada artículo se destacan contribuciones originales, pero en la tesis en general, su aporte original radica en estudiar la transformación digital y la orientación emprendedora en las PYMES desde un enfoque sistémico, como parte de sus capacidades dinámicas. Además, al integrar iniciativas de responsabilidad social y tecnologías digitales en sus operaciones, las pymes pueden mejorar su capacidad para adaptarse y responder a los cambios en el entorno empresarial, mejorando así su resiliencia general. También se subrayan algunos criterios que los profesionales de RR. HH. deberían considerar para aumentar la resiliencia organizacional,

destacando la relación positiva entre el análisis funcional y el enfoque estratégico para preparar a la organización para adaptarse a los cambios.

Otra contribución importante es vincular el capital intelectual con el desempeño de la empresa, profundizando en la comprensión de los impulsores del éxito en empresas y entornos basados en el conocimiento, un tema que aún no ha sido abordado adecuadamente en la literatura.

#### **1.4. BIBLIOGRAFÍA**

- Achdiat, I., Mulyani, S., Azis, Y., & Sukmadilaga, C. (2022). Roles of organizational learning culture in promoting innovation. *The Learning Organization*, 30(1), 76–92. <https://doi.org/10.1108/tlo-01-2021-0013>
- Adekola, J., & Clelland, D. (2019). Two sides of the same coin: Business resilience and community resilience. *Journal of Contingencies and Crisis Management*, 28(1), 50–60. <https://doi.org/10.1111/1468-5973.12275>
- Amabile, T. M. (1983). The social psychology of creativity: A componential conceptualization. *Journal of Personality and Social Psychology*, 45(2), 357–376. <https://doi.org/10.1037/0022-3514.45.2.357>
- Annarelli, A., & Nonino, F. (2016). Strategic and operational management of organizational resilience: Current state of research and future directions. *Omega*, 62, 1–18. <https://doi.org/10.1016/j.omega.2015.08.004>
- Antončić, B., & Hisrich, R. D. (2001). Intrapreneurship. *Journal of Business Venturing*, 16(5), 495–527. [https://doi.org/10.1016/s0883-9026\(99\)00054-3](https://doi.org/10.1016/s0883-9026(99)00054-3)
- Antunes, P. (2011). BPM and Exception Handling: Focus on Organizational Resilience. *IEEE Transactions on Systems, Man and Cybernetics*, 41(3), 383–392. <https://doi.org/10.1109/tsmcc.2010.2062504>
- Argote, L., Ingram, P., Levine, J. M., & Moreland, R. L. (2000). Knowledge Transfer in Organizations: Learning from the Experience of Others. *Organizational Behavior and Human Decision Processes*, 82(1), 1–8. <https://doi.org/10.1006/obhd.2000.2883>
- Armstrong, M., & Taylor, S. (2020). *Armstrong's Handbook of Human Resource Management Practice* (15th ed.). Kogan Page.

- Asensio, C. (2022, February 25). Andalucía es la tercera que más invierte en I+D pero de las últimas en gasto por habitante. *elEconomista.es*. Retrieved from <https://www.eleconomista.es>
- Autio, E., Nambisan, S., Thomas, L. D. W., & Wright, M. (2018). Digital affordances, spatial affordances, and the genesis of entrepreneurial ecosystems. *Strategic Entrepreneurship Journal*, 12(1), 72–95. <https://doi.org/10.1002/sej.1266>
- Bacinello, E., Tontini, G., & Alberton, A. (2020). Influence of corporate social responsibility on sustainable practices of small and medium-sized enterprises: Implications on business performance. *Corporate Social Responsibility and Environmental Management*, 28(2), 776–785. <https://doi.org/10.1002/csr.2087>
- Baer, M., & Fresé, M. (2002). Innovation is not enough: climates for initiative and psychological safety, process innovations, and firm performance. *Journal of Organizational Behavior*, 24(1), 45–68. <https://doi.org/10.1002/job.179>
- Balogun, A., Marks, D., Sharma, R., Shekhar, H., Balmes, C., Maheng, D., Arshad, A., & Salehi, P. (2020). Assessing the potentials of digitalization as a tool for climate change adaptation and sustainable development in urban centres. *Sustainable Cities and Society*, 53, 101888. <https://doi.org/10.1016/j.scs.2019.101888>
- Bardoel, A., Pettit, T. M., De Cieri, H., & McMillan, L. (2014). Employee resilience: an emerging challenge for HRM. *Asia Pacific Journal of Human Resources*, 52(3), 279–297. <https://doi.org/10.1111/1744-7941.12033>
- Bhamra, R., Dani, S., & Burnard, K. (2011). Resilience: the concept, a literature review and future directions. *International Journal of Production Research*, 49(18), 5375–5393. <https://doi.org/10.1080/00207543.2011.563826>
- Bharadwaj, A., Sawy, O. a. E., Pavlou, P. A., & Venkatraman, N. (2013). Digital Business Strategy: Toward a next generation of insights. *Management Information Systems Quarterly*, 37(2), 471–482. <https://doi.org/10.25300/misq/2013/37:2.3>
- Bolívar-Ramos, M. T., Morales, V. J. G., & García-Sánchez, E. (2012). Technological distinctive competencies and organizational learning: Effects on organizational innovation to improve firm performance. *Journal of Engineering and Technology Management*, 29(3), 331–357. <https://doi.org/10.1016/j.jengtecman.2012.03.006>
- Bouaziz, F., & Hachicha, Z. S. (2018). Strategic human resource management practices and organizational resilience. *Journal of Management Development*, 37(7), 537–551. <https://doi.org/10.1108/jmd-11-2017-0358>

- Boxall, P. (2012). High-performance work systems: what, why, how and for whom? *Asia Pacific Journal of Human Resources*, 50(2), 169–186. <https://doi.org/10.1111/j.1744-7941.2011.00012.x>
- Branicki, L., Steyer, V., & Sullivan-Taylor, B. (2016). Why resilience managers aren't resilient, and what human resource management can do about it. *International Journal of Human Resource Management*, 30(8), 1261–1286. <https://doi.org/10.1080/09585192.2016.1244104>
- Broadstock, D. C., Matoušek, R., Meyer, M., & Tzeremes, N. (2020). Does corporate social responsibility impact firms' innovation capacity? The indirect link between environmental & social governance implementation and innovation performance. *Journal of Business Research*, 119, 99–110. <https://doi.org/10.1016/j.jbusres.2019.07.014>
- Brockman, B. K. (2006). The moderating effect of organizational cohesiveness in knowledge use and new product development. *Journal of the Academy of Marketing Science*, 34(3), 295–307. <https://doi.org/10.1177/0092070306286707>
- Bullough, A., & Renko, M. (2013). Entrepreneurial resilience during challenging times. *Business Horizons*, 56(3), 343–350. <https://doi.org/10.1016/j.bushor.2013.01.001>
- Carayannis, E. G., Grigoroudis, E., Sindakis, S., & Walter, C. (2014). Business model innovation as antecedent of sustainable enterprise excellence and resilience. *Journal of the Knowledge Economy*, 5(3), 440–463. <https://doi.org/10.1007/s13132-014-0206-7>
- Castellacci, F., & Lie, C. M. (2015). Do the effects of R & D tax credits vary across industries? A meta-regression analysis. *Research Policy*, 44(4), 819–832. <https://doi.org/10.1016/j.respol.2015.01.010>
- Catalfo, P. (2015). Methodological Accounting Tools for the evaluation of intangibles management in research institutions: Some empirical remarks. *Journal of Service Science and Management*, 08(04), 638–648. <https://doi.org/10.4236/jssm.2015.84064>
- Chatzistamoulou, N. (2023). Is digital transformation the Deus ex Machina towards sustainability transition of the European SMEs? *Ecological Economics*, 206, 107739. <https://doi.org/10.1016/j.ecolecon.2023.107739>
- Chiva, R., Ghauri, P. N., & Alegre, J. (2013). Organizational Learning, Innovation and Internationalization: a complex system model. *British Journal of Management*, 25(4), 687–705. <https://doi.org/10.1111/1467-8551.12026>

- Chowdhury, S. (2013). HRM Practices and its Impact on Employee Satisfaction: A Case of Pharmaceutical Companies in Bangladesh. *International Journal of Research in Business and Social Science*, 2(3), 62–67. <https://doi.org/10.20525/ijrbs.v2i3.74>
- Ciasullo, M. V., Montera, R., & Douglas, A. (2022). Building SMEs' resilience in times of uncertainty: the role of big data analytics capability and co-innovation. *Transforming Government: People, Process and Policy*, 16(2), 203–217. <https://doi.org/10.1108/tg-07-2021-0120>
- Covin, J. G., & Slevin, D. P. (1989). Strategic management of small firms in hostile and benign environments. *Strategic Management Journal*, 10(1), 75–87. <https://doi.org/10.1002/smj.4250100107>
- Covin, J. G., & Slevin, D. P. (1991). A conceptual model of entrepreneurship as firm behavior. *Entrepreneurship Theory and Practice*, 16(1), 7–26. <https://doi.org/10.1177/104225879101600102>
- Dahles, H., & Susilowati, T. P. (2015). Business resilience in times of growth and crisis. *Annals of Tourism Research*, 51, 34–50. <https://doi.org/10.1016/j.annals.2015.01.002>
- Damanpour, F., & Evan, W. M. (1984). Organizational Innovation and Performance: The problem of “Organizational Lag.” *Administrative Science Quarterly*, 29(3), 392. <https://doi.org/10.2307/2393031>
- Damanpour, F., & Gopalakrishnan, S. (1998). Theories of organizational structure and innovation adoption: the role of environmental change. *Journal of Engineering and Technology Management*, 15(1), 1–24. [https://doi.org/10.1016/s0923-4748\(97\)00029-5](https://doi.org/10.1016/s0923-4748(97)00029-5)
- Damanpour, F., & Schneider, M. (2006). Phases of the adoption of Innovation in Organizations: Effects of environment, organization and top managers<sup>1</sup>. *British Journal of Management*, 17(3), 215–236. <https://doi.org/10.1111/j.1467-8551.2006.00498.x>
- Dávila, A., Foster, G., & Oyón, D. (2009). Accounting and Control, Entrepreneurship and Innovation: Venturing into New Research Opportunities. *European Accounting Review*, 18(2), 281–311. <https://doi.org/10.1080/09638180902731455>
- De Moura, D., & Tomei, P. A. (2021). Strategic Management of Organizational Resilience (SMOR): a Framework Proposition. *Revista Brasileira De Gestão De Negócios*, 23(3), 536–556. <https://doi.org/10.7819/rbgn.v.23i3.4118>
- Denning, P. J., & Dunham, R. (2011). The innovator's way: Essential practices for successful innovation. *Choice Reviews Online*, 48(06), 48–3365. <https://doi.org/10.5860/choice.48-3365>

- Dess, G. G., & Lumpkin, G. T. (2005). The role of entrepreneurial orientation in stimulating effective corporate entrepreneurship. *Academy of Management Perspectives*, 19(1), 147–156. <https://doi.org/10.5465/ame.2005.15841975>
- Díaz-Chao, Á., Sáinz, J., & Torrent-Sellens, J. (2015). ICT, innovation, and firm productivity: New evidence from small local firms. *Journal of Business Research*, 68(7), 1439–1444. <https://doi.org/10.1016/j.jbusres.2015.01.030>
- DiBella, J., Forrest, N., Burch, S., Rao-Williams, J., Ninomiya, S. M., Hermelingmeier, V., & Chisholm, K. (2022). Exploring the potential of SMEs to build individual, organizational, and community resilience through sustainability-oriented business practices. *Business Strategy and the Environment*, 32(1), 721–735. <https://doi.org/10.1002/bse.3171>
- Drucker, P. F. (1985). Innovation and entrepreneurship: Practice and principles. *Social Science Research Network*. [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1496169](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1496169)
- Duchek, S. (2019). Organizational resilience: a capability-based conceptualization. *Business Research*, 13(1), 215–246. <https://doi.org/10.1007/s40685-019-0085-7>
- Dwikat, S. Y., Arshad, D., & Shariff, M. N. M. (2023). Effect of competent human capital, strategic flexibility and turbulent environment on sustainable performance of SMEs in manufacturing industries in Palestine. *Sustainability*, 15(6), 4781. <https://doi.org/10.3390/su15064781>
- Edwards, J. S., Miles, M. P., D'Alessandro, S., & Frost, M. (2023). Entrepreneurial strategy-making, corporate entrepreneurship preparedness and entrepreneurial sales actions: Improving B2B sales performance. *Journal of Business Research*, 157, 113586. <https://doi.org/10.1016/j.jbusres.2022.113586>
- Elia, G., Margherita, A., & Passiante, G. (2020). Digital entrepreneurship ecosystem: How digital technologies and collective intelligence are reshaping the entrepreneurial process. *Technological Forecasting and Social Change*, 150, 119791. <https://doi.org/10.1016/j.techfore.2019.119791>
- Elkington, J. (1998). Partnerships from cannibals with forks: The triple bottom line of 21st-century business. *Environmental Quality Management*, 8(1), 37–51. <https://doi.org/10.1002/tqem.3310080106>
- Ettlie, J. E., Bridges, W. P., & O'Keefe, R. D. (1984). Organization strategy and structural differences for radical versus incremental innovation. *Management Science*, 30(6), 682–695. <https://doi.org/10.1287/mnsc.30.6.682>

- Evenseth, L. L., Sydnese, M., & Gausdal, A. H. (2022). Building Organizational resilience through Organizational Learning: A Systematic review. *Frontiers in Communication*, 7. <https://doi.org/10.3389/fcomm.2022.837386>
- Fiol, C. M., & Lyles, M. A. (1985). Organizational learning. *Academy of Management Review*, 10(4), 803–813. <https://doi.org/10.5465/amr.1985.4279103>
- Flanders, S., Hampton, D., Missi, P., Ipsan, C., & Gruebbel, C. (2020). Effectiveness of a staff resilience program in a pediatric intensive care unit. *Journal of Pediatric Nursing*, 50, 1–4. <https://doi.org/10.1016/j.pedn.2019.10.007>
- Foss, N. J., Husted, K., & Michailova, S. (2010). Governing knowledge sharing in organizations: levels of analysis, governance mechanisms, and research directions. *Journal of Management Studies*, 47(3), 455–482. <https://doi.org/10.1111/j.1467-6486.2009.00870.x>
- Frare, A. B., & Beuren, I. M. (2021). Fostering individual creativity in startups: comprehensive performance measurement systems, role clarity and strategic flexibility. *European Business Review*, 33(6), 869–891. <https://doi.org/10.1108/eb-11-2020-0262>
- Freund, A., Flynn, F. J., & O'Connor, K. (2023). Big is bad: stereotypes about organizational size, Profit-Seeking, and corporate ethicality. *Personality and Social Psychology Bulletin*, 014616722311517. <https://doi.org/10.1177/01461672231151791>
- Gimpel, H., & Röglinger, M. (2015). Digital transformation : Changes and chances – insights based on an empirical study. *Fraunhofer Institute for Applied Information Technology FIT*, 1–20. <https://www.fim-rc.de/Paperbibliothek/Veroeffentlicht/542/wi-542.pdf>
- Ginsberg, A., & Guth, W. D. (1990). Corporate Entrepreneurship (Guest Editors' introduction). *Social Science Research Network*. [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1505909](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1505909)
- Goh, S. C., & Richards, G. (1997). Benchmarking the learning capability of organizations. *European Management Journal*, 15(5), 575–583. [https://doi.org/10.1016/s0263-2373\(97\)00036-4](https://doi.org/10.1016/s0263-2373(97)00036-4)
- Guță, A. L. (2018). Organizational learning: cognitive and behavioural changes and implications in higher education institutions. *DOAJ (DOAJ: Directory of Open Access Journals)*. <https://doaj.org/article/2429c49e1e724b18b6afea28a75715ee>
- Hamouche, S. (2021). Human resource management and the COVID-19 crisis: implications, challenges, opportunities, and future organizational directions. *Journal of Management & Organization*, 29(5), 799–814. <https://doi.org/10.1017/jmo.2021.15>



- He, Z., Huang, H., Choi, H., & Bilgihan, A. (2022). Building organizational resilience with digital transformation. *Journal of Service Management*, 34(1), 147–171. <https://doi.org/10.1108/josm-06-2021-021>
- Heavin, C., & Power, D. (2018). Challenges for digital transformation – towards a conceptual decision support guide for managers. *Journal of Decision Systems*, 27(sup1), 38–45. <https://doi.org/10.1080/12460125.2018.1468697>
- Hedner, T., Abouzeedan, A., & Klosthen, M. (2011). Entrepreneurial resilience. *Annals of Innovation & Entrepreneurship*, 2(1), 7986. <https://doi.org/10.3402/aie.v2i1.6002>
- Hillmann, J., & Guenther, E. (2020). Organizational resilience: a valuable construct for management research? *International Journal of Management Reviews*, 23(1), 7–44. <https://doi.org/10.1111/ijmr.12239>
- Ho, G. K. S., Lam, C. Y. T., & Law, R. (2022). Conceptual framework of strategic leadership and organizational resilience for the hospitality and tourism industry for coping with environmental uncertainty. *Journal of Hospitality and Tourism Insights*, 6(2), 835–852. <https://doi.org/10.1108/jhti-09-2021-0242>
- Huber, G. P. (1991). Organizational learning: the contributing processes and the literatures. *Organization Science*, 2(1), 88–115. <https://doi.org/10.1287/orsc.2.1.88>
- Hult, G. T. M., Hurley, R. F., & Knight, G. (2004). Innovativeness: Its antecedents and impact on business performance. *Industrial Marketing Management*, 33(5), 429–438. <https://doi.org/10.1016/j.indmarman.2003.08.015>
- Hurley, R. F., & Hult, G. T. M. (1998). Innovation, Market Orientation, and Organizational Learning: An integration and Empirical Examination. *Journal of Marketing*, 62(3), 42–54. <https://doi.org/10.1177/002224299806200303>
- Jarrahi, M. H., & Sawyer, S. (2013). Social technologies, informal knowledge practices, and the enterprise. *Journal of Organizational Computing and Electronic Commerce*, 23(1–2), 110–137. <https://doi.org/10.1080/10919392.2013.748613>
- Jones, G. R., & Butler, J. E. (1992). Managing Internal Corporate Entrepreneurship: An Agency Theory Perspective. *Journal of Management*, 18(4), 733–749. <https://doi.org/10.1177/014920639201800408>
- Kantur, D. (2015). Measuring organizational resilience: a scale development. *Journal of Business, Economics and Finance*, 4(3), 456. <https://doi.org/10.17261/pressacademia.2015313066>
- Karanika-Murray, M., Whysall, Z., Liu-Smith, Y., Feltbower, C., & Challans-Rasool, E. (2023). Understanding organizational learning in a healthcare organization during

- sudden and disruptive change. *International Journal of Workplace Health Management*, 16(4), 257–280. <https://doi.org/10.1108/ijwhm-09-2022-0145>
- Kehoe, R. R., & Wright, P. M. (2010). The impact of high-performance human resource Practices on employees' attitudes and behaviors. *Journal of Management*, 39(2), 366–391. <https://doi.org/10.1177/0149206310365901>
- Kfir, I. (2021). Innovating to Survive, A look at how extremists adapt to counterterrorism. *Studies in Conflict & Terrorism*, 46(7), 1263–1281. <https://doi.org/10.1080/1057610x.2021.1926069>
- Khedhaouria, A., Nakara, W. A., Gharbi, S., & Bahri, C. (2020). The Relationship between Organizational Culture and small-firm performance: Entrepreneurial orientation as mediator. *European Management Review*, 17(2), 515–528. <https://doi.org/10.1111/emre.12383>
- Kim, S., Vaiman, V., & Sanders, K. (2022). Strategic human resource management in the era of environmental disruptions. *Human Resource Management*, 61(3), 283–293. <https://doi.org/10.1002/hrm.22107>
- Kimberly, J. R., & Evanisko, M. J. (1981). Organizational innovation: the influence of individual, organizational, and contextual factors on hospital adoption of technological and administrative innovations. *Academy of Management Journal*, 24(4), 689–713. <https://doi.org/10.2307/256170>
- Knight, G. (1997). Firm orientation and strategy under regional market integration: A study of Canadian firms. *The International Executive*, 39(3), 351–374. <https://doi.org/10.1002/tie.5060390305>
- Kohtamäki, M., Parida, V., Patel, P. C., & Gebauer, H. (2020). The relationship between digitalization and servitization: The role of servitization in capturing the financial potential of digitalization. *Technological Forecasting and Social Change*, 151, 119804. <https://doi.org/10.1016/j.techfore.2019.119804>
- Kraus, S., Clauß, T., Breier, M., Gast, J., Zardini, A., & Tiberius, V. (2020). The economics of COVID-19: Initial empirical evidence on how family firms in five European countries cope with the corona crisis. *International Journal of Entrepreneurial Behaviour & Research*, 26(5), 1067–1092. <https://doi.org/10.1108/ijebr-04-2020-0214>
- Kraus, S., Jones, P., Kailer, N., Weinmann, A., Chaparro-Banegas, N., & Roig-Tierno, N. (2021). Digital Transformation: An overview of the current state of the art of research. *SAGE Open*, 11(3), 215824402110475. <https://doi.org/10.1177/21582440211047576>

- Kreiser, P. M., Marino, L., & Weaver, K. M. (2002). Reassessing the environment-EO Link: The impact of environmental hostility on the dimensions of entrepreneurial orientation. *Proceedings - Academy of Management*, 2002(1), G1–G6. <https://doi.org/10.5465/apbpp.2002.7516619>
- Lado, A. A., & Wilson, M. (1994). Human resource systems and sustained competitive advantage: A competency-based perspective. *Academy of Management Review*, 19(4), 699. <https://doi.org/10.2307/258742>
- Lee, J. S., Back, K. J., & Chan, E. S. (2015). Quality of work life and job satisfaction among frontline hotel employees. *International Journal of Contemporary Hospitality Management*, 27(5), 768–789. <https://doi.org/10.1108/ijchm-11-2013-0530>
- Lee, K., Kim, Y., & Joshi, K. (2017). Organizational memory and new product development performance: Investigating the role of organizational ambidexterity. *Technological Forecasting and Social Change*, 120, 117–129. <https://doi.org/10.1016/j.techfore.2016.12.016>
- Lemon, M., & Sahota, P. S. (2004). Organizational culture as a knowledge repository for increased innovative capacity. *Technovation*, 24(6), 483–498. [https://doi.org/10.1016/s0166-4972\(02\)00102-5](https://doi.org/10.1016/s0166-4972(02)00102-5)
- Lengnick-Hall, C. A., Beck, T. E., & Lengnick-Hall, M. L. (2011). Developing a capacity for organizational resilience through strategic human resource management. *Human Resource Management Review*, 21(3), 243–255. <https://doi.org/10.1016/j.hrmr.2010.07.001>
- Li, B., Wan, J., Lin, Q., & Jianping, H. (2022). Unveiling the role of knowledge management capabilities in strategic emergency response: insights from the impact of COVID-19 on China's new economy firms. *Journal of Knowledge Management*, 27(1), 47–58. <https://doi.org/10.1108/jkm-02-2022-0095>
- Li, F. (2020). Leading digital transformation: three emerging approaches for managing the transition. *International Journal of Operations & Production Management*, 40(6), 809–817. <https://doi.org/10.1108/ijopm-04-2020-0202>
- Linnenluecke, M. K., & Griffiths, A. (2011). Beyond adaptation: Resilience for business in light of climate change and weather extremes. *Business & Society*, 49(3), 477–511. <https://doi.org/10.1177/0007650310368814>
- Liu, D., Chen, S., & Chou, T. (2011). Resources fit in digital transformation. *Management Decision*, 49(10), 1728–1742. <https://doi.org/10.1108/00251741111183852>

- Liu, Y., Cooper, C. L., & Tarba, S. Y. (2019). Resilience, wellbeing and HRM: a multidisciplinary perspective. *International Journal of Human Resource Management*, 30(8), 1227–1238. <https://doi.org/10.1080/09585192.2019.1565370>
- Liu, Y., & Yin, J. (2020). Stakeholder relationships and organizational resilience. *Management and Organization Review*, 16(5), 986–990. <https://doi.org/10.1017/mor.2020.58>
- Low, M. P., & Bu, M. (2021). Examining the impetus for internal CSR practices with digitalization strategy in the service industry during COVID-19 pandemic. *Business Ethics, the Environment and Responsibility*, 31(1), 209–223. <https://doi.org/10.1111/beer.12408>
- Lumpkin, G. T., & Dess, G. G. (1996). Clarifying the entrepreneurial orientation construct and linking it to performance. *Academy of Management Review*, 21(1), 135. <https://doi.org/10.2307/258632>
- Lumpkin, G. T., & Dess, G. G. (2001). Linking two dimensions of entrepreneurial orientation to firm performance. *Journal of Business Venturing*, 16(5), 429–451. [https://doi.org/10.1016/s0883-9026\(00\)00048-3](https://doi.org/10.1016/s0883-9026(00)00048-3)
- Mackey, J. D., Frieder, R. E., Perrewé, P. L., Gallagher, V. C., & Brymer, R. A. (2014). Empowered employees as social deviants: The role of Abusive supervision. *Journal of Business and Psychology*, 30(1), 149–162. <https://doi.org/10.1007/s10869-014-9345-x>
- Martín-Rojas, R. M. (2012). *Análisis del impacto de la tecnología en los hoteles andaluces y en las empresas de alta tecnología* [PhD dissertation, Universidad de Granada]. <https://digibug.ugr.es/bitstream/10481/19066/1/19967020.pdf>
- Matt, C., Heß, T., & Benlian, A. (2015). Digital transformation strategies. *Business & Information Systems Engineering*, 57(5), 339–343. <https://doi.org/10.1007/s12599-015-0401-5>
- Mattera, M., Soto, F., Ruiz-Morales, C. A., & Gava, L. (2021). Facing a global crisis - how sustainable business models helped firms overcome COVID. *Corporate Governance*, 21(6), 1100–1116. <https://doi.org/10.1108/cg-07-2020-0309>
- Miller, D. (1983). The correlates of entrepreneurship in three types of firms. *Management Science*, 29(7), 770–791. <https://doi.org/10.1287/mnsc.29.7.770>
- Minbaeva, D. (2005). HRM practices and MNC knowledge transfer. *Personnel Review*, 34(1), 125–144. <https://doi.org/10.1108/00483480510571914>
- Miranda, N., & Fernando, W. (2020). The impact of human resource management practices of the managers on Perceived Organizational Performance—A Study on Ceylon Fisheries Corporation in Sri Lanka. *OAlib*, 07(12), 1–21. <https://doi.org/10.4236/oalib.1107034>

- Mosca, M. (2020). *Digitalization of HRM: a study of success factors and consequences in the last decade*. <https://essay.utwente.nl/82872/>
- Nambisan, S. (2017). Digital entrepreneurship: Toward a digital technology perspective of entrepreneurship. *Entrepreneurship Theory and Practice*, 41(6), 1029–1055. <https://doi.org/10.1111/etap.12254>
- Nambisan, S., Wright, M., & Feldman, M. P. (2019). The digital transformation of innovation and entrepreneurship: Progress, challenges and key themes. *Research Policy*, 48(8), 103773. <https://doi.org/10.1016/j.respol.2019.03.018>
- Naqshbandi, M. M., Meeran, S., & Wilkinson, A. (2022). On the soft side of open innovation: the role of human resource practices, organizational learning culture and knowledge sharing. *R&D Management*, 53(2), 279–297. <https://doi.org/10.1111/radm.12566>
- Novalia, W., & Malekpour, S. (2020). Theorising the role of crisis for transformative adaptation. *Environmental Science & Policy*, 112, 361–370. <https://doi.org/10.1016/j.envsci.2020.07.009>
- O’Brolcháin, F., Jacquemard, T., Monaghan, D., O’Connor, N. E., Novitzky, P., & Gordijn, B. (2015). The convergence of virtual reality and social networks: threats to privacy and autonomy. *Science and Engineering Ethics*, 22(1), 1–29. <https://doi.org/10.1007/s11948-014-9621-1>
- Ortiz-de-Mandojana, N., & Bansal, P. (2015). The long-term benefits of organizational resilience through sustainable business practices. *Strategic Management Journal*, 37(8), 1615–1631. <https://doi.org/10.1002/smj.2410>
- Porter, M. E., & Kramer, M. R. (2007). Strategy and society: The link between competitive advantage and corporate social responsibility. *Strategic Direction*, 23(5). <https://doi.org/10.1108/sd.2007.05623ead.006>
- Rafiki, A., Nasution, M. D. T. P., Rossanty, Y., & Sari, P. B. (2021). Organizational learning, entrepreneurial orientation and personal values towards SMEs’ growth in Indonesia. *Journal of Science & Technology Policy Management*, 14(1), 181–212. <https://doi.org/10.1108/jstpm-03-2020-0059>
- Ramos, E., Patrucco, A. S., & Chavez, M. (2021). Dynamic capabilities in the “new normal”: a study of organizational flexibility, integration and agility in the Peruvian coffee supply chain. *Supply Chain Management*, 28(1), 55–73. <https://doi.org/10.1108/scm-12-2020-0620>

- Renko, E., Knittle, K., Palsola, M., Lintunen, T., & Hankonen, N. (2020). Acceptability, reach and implementation of a training to enhance teachers' skills in physical activity promotion. *BMC Public Health*, 20(1). <https://doi.org/10.1186/s12889-020-09653-x>
- Roberts, P., & Amit, R. (2003). The dynamics of innovative activity and Competitive Advantage: The case of Australian Retail Banking, 1981 to 1995. *Organization Science*, 14(2), 107–122. <https://doi.org/10.1287/orsc.14.2.107.14990>
- Rojas, R. M., Fernández-Pérez, V., & García-Sánchez, E. (2017). Encouraging organizational performance through the influence of technological distinctive competencies on components of corporate entrepreneurship. *International Entrepreneurship and Management Journal*, 13(2), 397–426. <https://doi.org/10.1007/s11365-016-0406-7>
- Rojas, R. M., Garrido-Moreno, A., & Morales, V. J. G. (2023). Social media use, corporate entrepreneurship and organizational resilience: A recipe for SMEs success in a post-Covid scenario. *Technological Forecasting and Social Change*, 190, 122421. <https://doi.org/10.1016/j.techfore.2023.122421>
- Rosenbusch, N., Brinckmann, J., & Bausch, A. (2011). Is innovation always beneficial? A meta-analysis of the relationship between innovation and performance in SMEs. *Journal of Business Venturing*, 26(4), 441–457. <https://doi.org/10.1016/j.jbusvent.2009.12.002>
- Sajko, M., Boone, C., & Buyl, T. (2020). CEO greed, corporate social responsibility, and organizational resilience to systemic shocks. *Journal of Management*, 47(4), 957–992. <https://doi.org/10.1177/0149206320902528>
- Schmid, Y., & Pscherer, F. (2021). Digital transformation affecting human resource activities: A mixed-methods approach. In *Lecture notes in networks and systems* (pp. 543–549). [https://doi.org/10.1007/978-3-030-85540-6\\_68](https://doi.org/10.1007/978-3-030-85540-6_68)
- Shemi, A. P., & Procter, C. (2018). E-commerce and entrepreneurship in SMEs: Case of myBot. *Journal of Small Business and Enterprise Development*, 25(3), 501–520. <https://doi.org/10.1108/jsbed-03-2017-0088>
- Shepherd, D. A., & Patzelt, H. (2011). The new field of sustainable entrepreneurship: Studying entrepreneurial action linking “What is to be sustained” with “What is to be developed.” *Entrepreneurship Theory and Practice*, 35(1), 137–163. <https://doi.org/10.1111/j.1540-6520.2010.00426.x>
- Shipton, H., Sparrow, P., Budhwar, P., & Brown, A. (2017). HRM and innovation: Looking across levels. *Human Resource Management Journal*, 27(2), 246–263. <https://doi.org/10.1111/1748-8583.12102>

- Schumpeter, J. A. (1934), "The theory of economic development", 1st Edition, Harvard University Press, Cambridge, MA.
- Si, S., Hall, J., Suddaby, R., Ahlström, D., & Jiang, W. (2023). Technology, entrepreneurship, innovation and social change in digital economics. *Technovation*, 119, 102484. <https://doi.org/10.1016/j.technovation.2022.102484>
- Srinivasan, A., & Venkatraman, N. (2017). Entrepreneurship in digital platforms: A network-centric view. *Strategic Entrepreneurship Journal*, 12(1), 54–71. <https://doi.org/10.1002/sej.1272>
- Sturm, S., Hohenstein, N., & Hartmann, E. (2023). Linking entrepreneurial orientation and supply chain resilience to strengthen business performance: an empirical analysis. *International Journal of Operations & Production Management*, 43(9), 1357–1386. <https://doi.org/10.1108/ijopm-07-2022-0418>
- Tarabishy, A. E., Solomon, G. T., Fernald, L. W., & Sashkin, M. (2005). The entrepreneurial leader's impact on the organization's performance in dynamic markets. *The Journal of Private Equity*, 8(4), 20–29. <https://doi.org/10.3905/jpe.2005.580519>
- Teece, D. J. (1986). Profiting from technological innovation: Implications for integration, collaboration, licensing and public policy. *Research Policy*, 15(6), 285–305. [https://doi.org/10.1016/0048-7333\(86\)90027-2](https://doi.org/10.1016/0048-7333(86)90027-2)
- Troise, C., Corvello, V., Ghobadian, A., & O'Regan, N. (2022). How can SMEs successfully navigate VUCA environment: The role of agility in the digital transformation era. *Technological Forecasting and Social Change*, 174, 121227. <https://doi.org/10.1016/j.techfore.2021.121227>
- Tseng, C. K., & Tseng, C. (2019). Corporate entrepreneurship as a strategic approach for internal innovation performance. *Asia Pacific Journal of Innovation and Entrepreneurship*, 13(1), 108–120. <https://doi.org/10.1108/apjie-08-2018-0047>
- Urbaniec, M., & Žur, A. (2020). Business model innovation in corporate entrepreneurship: exploratory insights from corporate accelerators. *International Entrepreneurship and Management Journal*, 17(2), 865–888. <https://doi.org/10.1007/s11365-020-00646-1>
- Van Der Vegt, G. S., Essens, P., Wahlström, M., & George, G. (2015). Managing risk and resilience. *Academy of Management Journal*, 58(4), 971–980. <https://doi.org/10.5465/amj.2015.4004>
- Varadarajan, R. (2018). Innovation, innovation strategy, and strategic innovation. In *Review of marketing research* (pp. 143–166). <https://doi.org/10.1108/s1548-643520180000015007>

- Verganti, R., & Shani, A. B. (2016). Vision transformation through radical circles. *Organizational Dynamics*, 45(2), 104–113. <https://doi.org/10.1016/j.orgdyn.2016.02.004>
- Verhoef, P. C., Broekhuizen, T., Bart, Y., Bhattacharya, A., Dong, J. Q., Fabian, N. E., & Haenlein, M. (2021). Digital transformation: A multidisciplinary reflection and research agenda. *Journal of Business Research*, 122, 889–901. <https://doi.org/10.1016/j.jbusres.2019.09.022>
- Vial, G. (2019). Understanding digital transformation: A review and a research agenda. *Journal of Strategic Information Systems*, 28(2), 118–144. <https://doi.org/10.1016/j.jsis.2019.01.003>
- Wang, Y. L., & Ellinger, A. D. (2011). Organizational learning. *International Journal of Manpower*, 32(5/6), 512–536. <https://doi.org/10.1108/01437721111158189>
- Wang, Y., Vanhaverbeke, W., & Roijakkers, N. (2012). Exploring the impact of open innovation on national systems of innovation — A theoretical analysis. *Technological Forecasting and Social Change*, 79(3), 419–428. <https://doi.org/10.1016/j.techfore.2011.08.009>
- Warner, K., & Wäger, M. (2019). Building dynamic capabilities for digital transformation: An ongoing process of strategic renewal. *Long Range Planning*, 52(3), 326–349. <https://doi.org/10.1016/j.lrp.2018.12.001>
- Wattiez, N., & Goy, H. (2023). The impact of digital transformation on business models: the case of innovation finance consultancies. *Finance Contrôle Stratégie*, 26–3. <https://doi.org/10.4000/fcs.10993>
- Werlang, N. B., & Rossetto, C. R. (2019). The effects of organizational learning and innovativeness on organizational performance in the service provision sector. *Gestão & Produção*, 26(3). <https://doi.org/10.1590/0104-530x3641-19>
- Wessel, L., Baiyere, A., Ologeanu-Taddei, R., Cha, J., & Jensen, T. B. (2021). Unpacking the difference between digital transformation and IT-Enabled organizational transformation. *Journal of the Association for Information Systems*, 22(1), 102–129. <https://doi.org/10.17705/1jais.00655>
- Westerman, G., McFarlan, F. W., & Iansiti, M. (2006). Organization Design and Effectiveness over the Innovation Life Cycle. *Organization Science*, 17(2), 230–238. <https://doi.org/10.1287/orsc.1050.0170>
- Wiklund, J., & Shepherd, D. A. (2005). Entrepreneurial orientation and small business performance: a configurational approach. *Journal of Business Venturing*, 20(1), 71–91. <https://doi.org/10.1016/j.jbusvent.2004.01.001>



- Williams, A., Whiteman, G., & Kennedy, S. S. (2019). Cross-Scale Systemic resilience: Implications for organization studies. *Business & Society*, 60(1), 95–124. <https://doi.org/10.1177/0007650319825870>
- Xie, X., Wu, Y., Palacios-Marqués, D., & Ribeiro-Navarrete, S. (2022). Business networks and organizational resilience capacity in the digital age during COVID-19: A perspective utilizing organizational information processing theory. *Technological Forecasting and Social Change*, 177, 121548. <https://doi.org/10.1016/j.techfore.2022.121548>
- Yuan, R., Luo, J., Liu, M., & Jiang, Y. (2022). Understanding organizational resilience in a platform-based sharing business: The role of absorptive capacity. *Journal of Business Research*, 141, 85–99. <https://doi.org/10.1016/j.jbusres.2021.11.012>
- Yunus, N. K. Y., Razak, A. Z. a. A., Rahman, R. A., & Ghouri, A. M. (2018). The influences of marketing, entrepreneurship and learning orientations towards firm performance of Malay entrepreneurs in Perak. *Social Science Research Network*. [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3306720](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3306720)
- Zaheer, H., Breyer, Y., & Dumay, J. (2019). Digital entrepreneurship: An interdisciplinary structured literature review and research agenda. *Technological Forecasting and Social Change*, 148, 119735. <https://doi.org/10.1016/j.techfore.2019.119735>
- Zahra, S. A. (1991). Predictors and financial outcomes of corporate entrepreneurship: An exploratory study. *Journal of Business Venturing*, 6(4), 259–285. [https://doi.org/10.1016/0883-9026\(91\)90019-a](https://doi.org/10.1016/0883-9026(91)90019-a)
- Zahra, S. A. (1993). Environment, corporate entrepreneurship, and financial performance: A taxonomic approach. *Journal of Business Venturing*, 8(4), 319–340. [https://doi.org/10.1016/0883-9026\(93\)90003-n](https://doi.org/10.1016/0883-9026(93)90003-n)
- Zhang, J., & Chen, Z. (2023). Exploring Human Resource Management Digital Transformation in the digital Age. *Journal of the Knowledge Economy*. <https://doi.org/10.1007/s13132-023-01214-y>
- Zighan, S., Abualqumboz, M., Dwaikat, N. Y., & Alkalha, Z. (2021). The role of entrepreneurial orientation in developing SMEs resilience capabilities throughout COVID-19. *The International Journal of Entrepreneurship and Innovation*, 23(4), 227–239. <https://doi.org/10.1177/14657503211046849>
- Zighan, S., & Ruel, S. (2021). SMEs' resilience from continuous improvement lenses. *Journal of Entrepreneurship in Emerging Economies*, 15(2), 233–253. <https://doi.org/10.1108/jee-06-2021-0235>

# *Capítulo 2*

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## **2. DIGITAL TRANSFORMATION INFLUENCE ON ORGANISATIONAL RESILIENCE THROUGH ORGANISATIONAL LEARNING AND INNOVATION**

### **2.1. ABSTRACT**

This study analyses how digital transformation enhances organisational resilience through organisational learning and innovation. This is usually not explored in previous research. As a result, the study experimentally validates these impacts and is based on a sample of 259 small and medium-sized Spanish companies from the region of Andalusia. This connection is founded on various theoretical underpinnings, including the resources-based view and dynamic capacities.

The research results suggest that digital transformation helps small and medium enterprises and improves their learning capacity in addition to enhancing their innovative side. This raises their level of resilience and thus their ability to adopt changes in the market and manage them in their favour. This research contributes to the enrichment of the theoretical and practical aspects of organisational resilience.

**Keywords** Digital transformation, Organisational learning, Innovation, Organisational resilience.

### **2.2. INTRODUCTION**

Currently, companies operate in an increasingly turbulent and ambiguous business environment (van der Vegt et al., 2015), which puts them under constant pressure and struggling to survive (Raj et al., 2022). Therefore, companies need to improve their organisational resilience (OR) and be more creative to survive and thrive (Liu and Yin, 2020).

Because resilience quickly contributes to decision-making and the development of alternatives to deal with a turbulent environment (Kantur, 2015; Lengnick-Hall et al., 2011). This, in turn, contributes to business viability and thus organisational resilience, which can be defined as the ability to withstand significant business disruptions due to unexpected or sudden events and to expand organisational systems beyond planned service limits without incurring huge losses (Guilhermino Trindade et al., 2012). Incorporating technological technologies in

different companies helps organisations to become resilient. This requires companies to be innovative (Bustinza et al., 2016).

This is because innovations (INN) are important and involve changing existing organisational efficiencies (Mezias and Glynn, 1993). In an increasingly competitive business environment, innovation is recognized as a key driver for companies looking to create sustainable competitive value and advantages (Wang and Wang, 2012). Innovation can be defined on two levels: improvements and new directions. Improvements include solutions designed to better fit existing definitions of value, existing problems, or create new directions (Verganti and Shani, 2016).

Digital transformation (DT) constitutes an innovative response to meet customer needs and maintain company sustainability and competitive advantages. Companies innovate to respond to change, retain customers, meet their needs, and improve business portfolios, thus unifying a long-term business plan (Damanpur and Gopalakrishnan, 1998; Roberts and Amit, 1998), 2003).

Hence, the adoption of digital transformation has been recognized as a strategic approach to enhance business performance and resilience, as emphasised by Schallmo et al. (2019). This strategy not only facilitates the optimization of existing core competencies or the development of new ones, thereby maintaining a competitive edge, as highlighted by Liu et al. (2011), but it is also inherently linked to strategic changes in the business model through the integration of digital technologies (Gregori and Holzmann, 2020). Positioned as an avenue for innovation, digital transformation, according to Hinings et al. (2018), serves as an opportunity to foster creativity, enhance communication, and streamline operational efficiencies, as discussed by Díaz-Chao et al. (2015) and Bharadwaj et al. (2013).

Innovation and digital transformation require the acquisition and assimilation of new knowledge and new ideas (Hurley and Hult, 1998), and this new knowledge is added to the organisational memory and knowledge base of the organisation (Salvou et al., 2004). In this way it helps companies to develop products, services and business processes that enable them to be competitive (Cefis, 2005). This improves organisational performance and increases organisational capacity (Lipshitz et al., 1996). Where innovation requires people to share this knowledge within the organisation (Cohen and Levinthal, 1990).

Thus Organisational Learning (OL) helps improve company understanding and development. Because learning enhances creativity and uses and uses knowledge to develop innovations, it also relies on organisational intelligence (García-Morales et al., 2007).

Kuchinke (1995) defined learning as “the basic mechanism by which organisations, as open systems, interact with their environment, process information, and adapt to changing external and internal conditions.”

Therefore, Bhatnagar, (2008) pointed out that innovation can be increased through learning (Kogut and Zander, 1992). Technological development and digital technologies contribute to the development of ways to acquire this knowledge from a specific attributable to loneliness and transmission to another person (Dar et al., 1995).

Transformation is supported by providing necessary knowledge and backed by innovation to enable companies to maintain their performance and develop competitive advantages that will enable them to continue to exist in the volatile market in the future (SrikalImah et al., 2020; Argote and Miron Spector, 2011).

This paper addresses this gap in the literature through the empirical investigation of how digital transformation affects organisational resilience, through innovation and organisational learning. Previous studies (Robertson et al., 2022; Matos et al., 2022; Sgobbi and L, 2022) indicated that digital transformation can be achieved through situational awareness and management decisions, and that digital transformation is linked to innovation and creativity positively and building organisational resilience. Based on the degrees of innovation (Dwyer et al., 2021), and Xie et al. (2022), indicated that ambidextrous learning has the ability to raise the resilience of companies, especially when the use of digital technologies is at a high level.

These studies confirmed the need to expand future research to study these variables and other variables that may impact organisational resilience in samples from different countries. Therefore, this study aims to answer the question “Does digital transformation enhance organisational resilience in small and medium enterprises through innovation and learning?” And also expanding the scope of knowledge on this subject by studying digital transformation and integrating it in companies on a systematic basis. And knowing and devising appropriate ways to implement it so that companies become more viable and more flexible. To the best of our knowledge, this is the first empirical study to analyse the phenomenon by categorising it;.

This study also aims to contribute to the organisational learning and innovation literature by enhancing understanding of how these dimensions are related or interact.

The article is organised as follows: The next section consists of a literature review that has been carried out to propose a research model and to describe the hypotheses of our research. Then we introduce the methodology, analyse the data, and discuss the results. Finally, we include concluding remarks, implications for scientists and managers, and limitations and lines for future research.

### 2.3. THEORETICAL FRAMEWORK AND RESEARCH HYPOTHESES

The purpose of the study is to examine the role of digital transformation in achieving organisational resilience through organisational learning and innovation. To this end, we designed a comprehensive research model (see Fig. 1). The model includes a total of 5 hypotheses reflecting: . This section presents the theoretical support for the proposed research model.

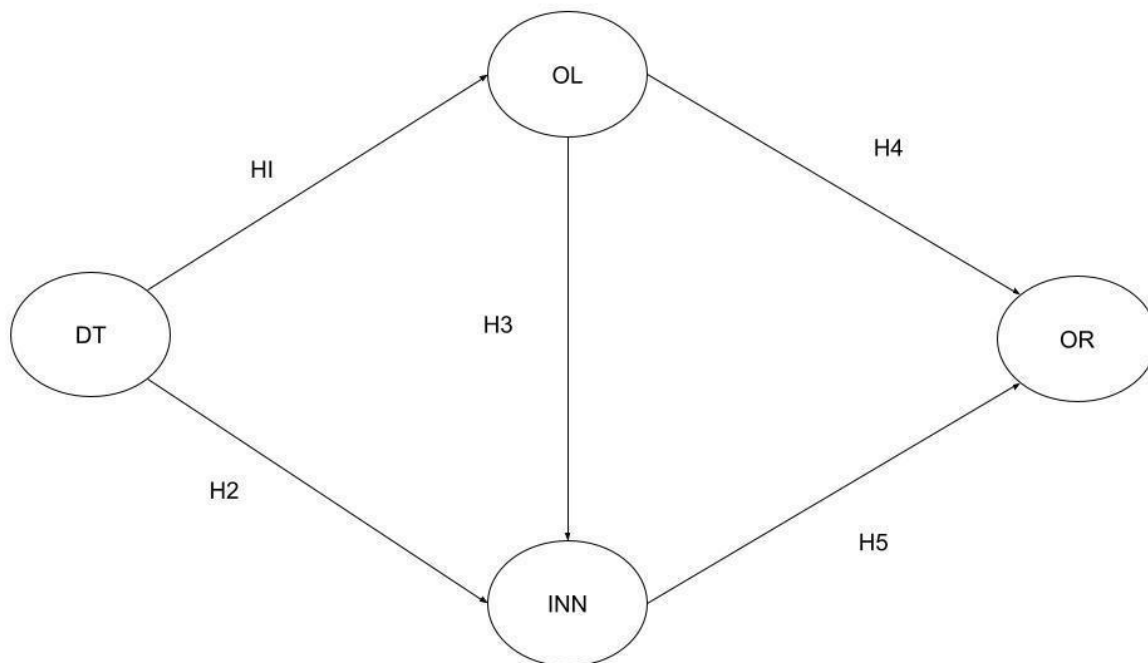


Fig. 2.1. Hypothesised model.

### **2.3.1. The influence of digital transformation on organisational learning.**

Digital transformation is a broad concept that refers to the integration of digital technologies into the operations of organisations to achieve their organisational goals (Horváth and Szabó, 2019), so DT is seen as a strategic goal for organisations.

As these digital technologies help improve competitive advantages by leveraging existing company resources and developing new capabilities (Liu et al., 2011). This is only achieved through several structural and organisational changes (Bharadwaj et al., 2013). So as to integrate digital technologies with organisational capabilities to get the most out of digitization (Raj et al., 2022).

DT inherently relates to organisational change due to the use of different digital technologies, leading to a change in value creation and consumption patterns (Wessel et al., 2021), as well as a change in business models, and the development of new products, services and business processes (Verhoef et al., 2021).

These digital technologies help improve competitive advantages by leveraging existing corporate resources and developing new capabilities (Liu et al., 2011). This is only achieved through many changes in business strategy. Therefore, the learning process in the light of DT leads companies to assess the extent of their need for this type of transformation and determine the level of knowledge required for its urges (Goh and Richards, 1997).

Organisational learning relates to changes in cognition, beliefs, and behaviour (Easterby-Smith et al., 2000). and a change in organisational knowledge (Fiol and Lyles, 1985). Firms learn by creating and retaining new knowledge and then transferring that knowledge to different units in the firm (Argote and Ingram, 2000) or learning indirectly (Bandura, 1977), from the experience of other units (Easterby-Smith and Prieto, 2008). It refers to the integration of knowledge acquisition and organisational change based on action and their workforce. This is because the learning process is closely related to the creation and use of knowledge within organisations and at all levels from the individual, group and organisational level (Yu, 2004; Garvin et al., 2021).

From a resource-based view (RBV), firms can recognize the firm's capabilities and resources and its development, and thus seize appropriate market opportunities (Wernerfelt, 1984; Makadok, 2001).

Firms differ in their resources and their ability to use it to create value that differentiates them from their competitors (Roberts and Amit, 2003). Peteraf (1993) presents the idea of creating knowledge in all parts of the company, understanding the environment and changes around the company, and then using this knowledge to develop one's skills in dealing with the environment. The main premise of this theory is the participatory approach, interaction and involvement of information technology workers who direct and enhance learning (Jarrahi and Sawyer, 2013).

Provided that the old knowledge is used to apply the new knowledge, because the knowledge accumulated by the firm can develop the appropriate viability of the firm so the firm can benefit from the new knowledge and create value (Cohen and Levinthal, 1990). Where OL is a long-term change in organisational behaviour (Fiol and Lyles, 1985), that is critical to fostering the change process (Lozano, 2011).

OL considered an important driver in the development of new products and services that adapt to technological evolution, maintain competitive advantage, and respond to customer demands, since knowledge can maintain competitive advantage and continuity in the face of the uncertainty and ambiguity inherent in times of crisis (Dekoulou and Trivellas, 2014).

In addition to the fact that the use of these technologies has behavioural and structural effects on knowledge management, the DT with its various technologies contributes to behavioural change by improving human interaction in companies, thus contributing to the constant transmission and development of knowledge, such as Structural effects, these transformations facilitate the process of accessing internal or external sources of knowledge and thus facilitate their development (Vega-Jurado et al., 2009). While they are structural influencers, they excel at understanding how SMEs can adapt and respond to the demands of a new society and how they can use digital technologies to rethink their operations and business models (Ebert and Duarte, 2018; Leão and Silva, 2021) and preparing Best for potential new crises (Ravindran and Boh, 2020).

On the two sides of the DT that we discuss in this study, social media facilitates the process of accessing knowledge and its various sources, in addition to its contribution to enhancing the learning process and making it open and available to everyone, be it an individual or institutional process. On the other hand, the learning process contributes to the adaptation of these means. In order to achieve corporate goals and the process of adapting business models (Razmerita et al., 2014).



However, integrating digital technologies into business strategies is not easy, especially for small and medium-sized businesses that lack the experience and human skills to adopt these technologies, in addition to the need to find ways to modify and adapt these technologies. DT is constantly evolving, keeping pace with digital development, and new technologies require companies to be able to continue the process of learning and acquiring new knowledge and skills. This means that the learning process is continuous and the ability of the DT process to deliver the required value. OL is closely related to knowledge management, where knowledge management aims to develop the effectiveness of the organisation and its members, and OL improves the cycle of knowledge formation and information management, which helps improve the level of response to extraordinary circumstances and dynamic change and reduce uncertainties. ( Chiva et al., 2014).

This shows that knowledge management is crucial to understand the new data imposed by the crisis and to adapt transformation technologies to new market demands, thus contributing to the formation of a normative strategic approach, able to meet new consumption patterns and a comprehensive overview obtain about supply and demand (Ravindran and Boh, 2020). Knowledge management is an essential aspect of the transformation process and helps to create awareness and predictability in uncertain situations, increasing the ability of SMEs to deal with such crises (Arkan, 2016; Klein and Todesco, 2021) and to be better prepared for potential new crises (Ravindran and Boh, 2020). We therefore formulate the following hypothesis:

*H1: Digital transformation has a positive impact on organisational learning in SMEs.*

### **2.3.2. The influence of digital transformation on innovation.**

In recent years, digital transformation (DT), has become a widespread phenomenon (Fitzgerald, 2013). Since the mid-20th century, digital technologies such as (smart devices, social media, advanced analytics, machine learning, the Internet of Things, artificial intelligence, etc.) have become a major player in the business world. DT describes organisational changes and transformations based on these technologies.

According to Fitzgerald (2013), DT focuses on integrating these technologies into the business world, and the goal of this transformation is to achieve improvements in business functions related to customer experience, to facilitate key processes, and to develop or create new business models .Vial (2019), described it as “a process aimed at improving an entity by

making significant changes in its characteristics through combinations of configuration, computing, communications and connectivity technologies.”

Businesses have increasingly adopted digital transformation in the Covid-19 period as a way to improve their ability to withstand the shocks of the pandemic. Because businesses become more resilient by embracing DT as a strategy (Barber et al., 2019). While DT impacts entire firms, leads to changes in business processes, and helps companies to gain a competitive advantage by updating or developing their core competencies (Liu et al., 2011), it also enables companies to add value to their customers (von Leipzig et al., 2017).

The concept of DT has regulatory implications for the entire firm as well as the business model where changes are achieved dependent on digital technology (Agarwal et al., 2010; Liu et al., 2011). Enhancing the role of DT, which is about integrating digital technologies into business processes, has become popular during the COVID era due to the need for business continuity and loss reduction (Galindo-Martín et al., 2019). where all corporate websites, electronic applications and social media (e.g. Instagram, Facebook, WhatsApp) help to advertise services and products online. In addition, the use of video conferencing technologies, e-learning and e-commerce and marketing have generated a strong response from small businesses (Ulas, 2019).

These digital technologies are driving changes in the business environment, creating new opportunities and innovative initiatives (Díaz-Chao et al., 2015). Thereby it contributes to the development of supply chains, knowledge transfer and the development of operational efficiencies (Westerman et al., 2014) as well as the creation of new products, services and business processes (Bharadwaj et al., 2013).

According to Guinan et al. (2019), integrating innovation into the DT process requires a wide range of managerial and technical skills and leads to either significant or discontinuous changes in technology-dependent production processes (Damanpour and Gopalakrishnan, 1998; Hagedoorn, 1996). Innovation is the term used to describe the changes in the economy brought about by the use of new technologies and technologies in production processes. These changes may involve the development of new goods, services, markets, manufacturing methods, sources of supply and business models (Cefis, 2005). Changes in management, in technology or in the digital area can also be described as innovations.

Innovation is seen as a tool for surviving in turbulent markets as it helps produce goods and services suited to new markets. Therefore, innovation is the main driver for changes in the transformation process in different phases, depending on the preservation of the digital sources (Matzler et al., 2018). Nambisan et al.(2017) emphasised that there are links between developments in goods and services, business models and DT.

Furthermore, dynamic management capabilities (Helfat and Peteraf, 2014) are vital for scenario planning to acquire insights into unforeseen goals, and it is feasible to predict possibilities, have a clearer picture, and push cognitive boundaries by employing digital tools. (Holland et al., 2000).

Accordingly, dynamic capabilities are key contributors to the change and transformation process and help to make the most of new opportunities and ideas (Zollo and Winter, 2002). Hence, dynamic skills are an essential part of the innovation process as they contribute to access to new information (Nelson and Winter, 1982; March, 1991). Because innovation is based on experimentation and exploration based on available sources and requires a high level of diversity (March, 1991). Dynamic skills also depend on the speed of knowledge generation (Ambrosini and Bowman, 2009). This shows that there is a link between innovation and dynamic skills, leading to the use of dynamic skills in innovation contexts.

Additionally, paying attention to the innovation process as well as defining the company's strategic vision and managing its operations in order to draw attention to commercialization are important response actions to absorb and incorporate digital technologies into digital organisational changes (Fitzgerald, 2013).

Social media and digital technologies are essential to the digitization of communication and distribution channels because they have a direct and indirect impact on the innovation process that supports the different phases of the digital transformation. Companies must use these resources to enter the market, concentrate on customers and their needs, and avoid complexity (Muninger et al., 2019). The DT process, whether it be in operations or interpersonal interactions, offers a variety of alternatives and strategic methods to deal with problems and encourage creativity. The interaction and integration of digital components are necessary for this (Huang et al., 2017).

Due to the fact that the digital innovation strategy is founded on three elements—digital platforms, digital infrastructures, and digital manufacturers (Yoo et al., 2010). As

transformation delivery is typically characterised as a collection of activities driven by digital services and products as well as business model innovations, it becomes evident that digital transformation requires innovation at all phases (Vogelsang et al., 2018; Matt et al., 2015). As businesses innovate to adapt to change, engage customers and meet their needs, as well as improve business portfolios thus unify sustain long-term business plan, digital transformation has been a creative response to meet customer needs, maintain business sustainability and competitive advantages (Damanpour and Gopalakrishnan, 1998; Roberts and Amit, 2003; Weber and Tarba, 2014).

Thus, it is evident that the digital transformation in various industries and stages depends on the creation of new values for both customers and employees, and primarily depends on technological advancement, innovation, and changing business practices. It is also linked to the speed of transformation, the scale of business responses to consumer demands, and is known by digital technologies and management decisions that depend on digital data, among other factors. ( Li, 2020; Agarwal et al., 2010).

This indicates (Westerman et al., 2014) that companies have managed to use their resources to generate revenue when implementing digital transformation. Therefore, innovation is seen as an urgent need for survival. Finally, it uses modern technologies and practical applications, as well as new management methods and practices. Hennings found that the results of digital transformation are a cumulative effect of digital innovations (Hinings et al., 2018). Innovations in products and services, together with digital business models, form the basis for the change process of digital transformation and organisational changes (Matt et al., 2015). We therefore hypothesise that:

*H2: Digital transformation has a positive impact on Innovation in SMEs.*

### **2.3.3. The influence of organisational learning on organisational innovation.**

Organisational learning helps improve the company's receptiveness and develop products, services and business processes that allow it to be competitive (Cefis, 2005). This is because learning encourages creativity, capitalises on knowledge and uses it to develop innovations, also relying on organisational intelligence (García-Morales et al., 2007). Migdadi (2019) pointed out that innovation can be promoted through learning.

Innovation depends on improving the capabilities and resources of firms to develop their products, services and processes to improve their competitiveness (Szeto, 2000). The learning process is the creation, transmission and preservation of knowledge in the company, also the learning process can be driven with the company's ability to innovate, to develop and to benefit from the learning and organisational levels (Brockman and Morgan, 2003).

When organisations can determine the type of learning that suits their situation, they decide whether they need either looped learning that depends on the continuity of the organisation's current situation in terms of strategy and goals while they work on correcting problems, or two-loop that involves changing goals and standards as errors are discovered and corrected, and this is done by defining the type of knowledge required, whether they be drastic or incremental changes, or whether they are systematic or innovative thinking that ensures innovative improvements are achieved (Francis and Bessant, 2005).

Innovation must improve the process of learning and knowledge management in order to enable it, direct it in the right direction and reinforce it in its various forms (Bolívar-Ramos et al., 2012). The use of this knowledge in the development of products that meet market needs, and this process leads to new knowledge that requires a continuous process of learning and knowledge management to develop and disseminate these innovations.

*H3: Organisational learning has a positive impact on innovation in SMEs.*

#### **2.3.4. The influence of organisational learning on organisational resilience.**

Organisational learning is based on the acquisition of knowledge from both the internal and external environment, and this acquired knowledge is translated into part of the organisation's knowledge system (Chiva et al., 2014). Utilisation of this knowledge and its appropriate distribution or retention in organisational memory for future use and hence utilisation in the organisational capabilities that increase the firm's competitive advantage (Crossan and Berdrow, 2003) .

Organisational learning aims to achieve competitive advantage for learning organisations by gathering knowledge from all stages and integrating it into the learning process for effective employee growth and learning, where organisational learning is defined as the ability to transfer learning. The process from the individual and group level to organisation through four practical steps of organisational learning: knowledge acquisition, sharing, interpretation and retention in

organisational memory to maintain performance and competitive advantage, allowing the organisation that learns faster to outperform its competitors . As well as the importance of learning in fostering a culture of creativity and experimentation in organisations. (Vakola and Rezgui, 2000; Kafashpoor et al., 2013).

The resource-based view is based on the use of resources to introduce new products, services and processes and to achieve competitive advantage (Ray et al., 2003). Furthermore, a dynamic skill depends on its organisational context and on its valuable, rare, and unique skills and core competencies rather than on its static resources (Newbert, 2007). Therefore OL ability is considered important for resilience (Bahadur et al., 2013).

Organisational resilience is the ability of organisations to anticipate, prepare for, respond to, adapt to, and recover from sudden changes and disruptions (Hillmann and Guenther, 2021). Also, OR refers to the ability of organisations to recover, manage, adapt, and absorb change (Vogus and Sutcliffe, 2007). They can be developed through various organisational resources such as structure, practices, cognition and behaviour(Lengnick-Hall et al., 2011; Markman and Venzin, 2014).

As highlighted by Vogus and Sutcliffe (2007), the knowledge generated through education is a contributor to organisational resilience (Vogus and Sutcliffe, 2007). Ma et al. (2018) suggest that an organisation's ability to think, learn, and grow from disruption is related to its resilience. Orth and Schedules (2021) propose that organisations' ability to absorb knowledge and learn from crises increases their resilience and performance. Therefore propose that learning ability is positively associated with building and maintaining organisational resilience (Do et al., 2022).

There are several main activities arising from learning processes and their different stages, such as from the experiences of others and the smooth transfer of knowledge at all levels within the organisation (Firestone, 2005). Therefore, learning is one of the skills that an organisation must have at its disposal to be resilient, along with the ability to react to reality, address critical issues (monitoring) and address skills (anticipation, and these skills will be identified and developed through knowledge management (Klein and Todesco, 2021).

Several researchers have developed a framework for organisational resilience that includes recognizing threats and ways to respond, adapting, and learning for the future (Bhamra et al., 2011). In addition, organisational skills to face the problem and develop solutions

(Duchek et al., 2019), and after the crisis the organisation learns from it for future events. There is a balance between learning from past experiences and new learning acquired in crises (Duchek, 2019). Hence, learning from inputs and outputs is a flexible process (Vogus and Sutcliffe, 2007). On the basis of these considerations, we formulate the following hypothesis:

*H4: Organisational learning has a positive impact on organisational resilience in SMEs.*

### **2.3.5. The influence of innovation on organisational resilience.**

Innovation usually refers to new ideas or practices that lead to new and valuable products, services or processes (Baregheh et al., 2009), also referring to both radical and incremental changes in ideas, in the process or in service (McKeown et al., 2008). Where innovation is based on the integration, synthesis and exchange of knowledge between the different units of the company, allowing creativity to thrive. This in turn provides a basis for innovation (Shipton et al., 2017; Song et al., 2006). Innovation is usually driven by the desire to achieve better performance and effectiveness, either through innovation generation or adoption. (Rosenbusch et al., 2011).

Therefore, innovation is seen as a vital tool to empower companies and maintain their performance, especially in the face of changing and turbulent markets, highly competitive business environments and ever-changing customer preferences and desires. Whereas innovative companies have the advantage of generally offering strong growth in profits and performance (Davila et al., 2009).

Furthermore, innovation increases the resilience of the firm as it keeps pace with market developments and stimulates innovation, adaptation and continuous creativity to solve problems, and its role in influencing the resilience and performance of firms has emerged (Nikpour, 2017). Resilience and innovation are both characterised by their ability to cope with an uncertain environment (Lengnick-Hall et al., 2011). Duchek, (2019) pointed out that resilience enables companies in uncertain environments to develop new learning, implement new processes and make better use of their resources.

Innovation therefore provides a platform for OR through proactive learning behaviours that facilitate the creation and transfer of knowledge within the organisation (Castellacci, 2015). Resilience, ability to anticipate change, and clear and well-structured communication help disruptive events occur to maintain competitive advantage and innovation. Because OR improves the ability to react immediately to customer requirements and improve its

competitive strategy through speed and efficiency in the development of new products and/or processes. So, these new innovations will be the answer to a difficult situation and will help maintain the overall performance of the organisation (Castellacci, 2015). This suggests that innovation is a key factor in organisational resilience (Carvalho et al., 2016; Davila et al., 2009).

*H5: Innovation has a positive impact on organisational resilience in SMEs.*

## **2.4. RESEARCH METHODS AND RESULTS**

### **2.4.1. Sample and procedure**

Data collection was based on a sample of 259 small and medium-sized enterprises in the province of Andalusia in Spain. In February to September of 2020, as the fallout from the crisis was still in its infancy, companies were trying to devise solutions to maintain their viability and resilience. For example, many companies have tried to use social media to communicate with their customers, and many companies have transformed most of their operations by relying on digital technologies. But others failed in the transformation process, either because of weak human and technical skills, or because of their resistance to change. (Klein and Todesco, 2021)

Thus, it is important to investigate how digital transformation affects the resilience of SMEs, given the different digital capabilities. We chose samples based on companies operating in a variety of service and manufacturing sectors, including information technology, real estate, consulting, construction, accounting and healthcare services. We received 259 replies.

Prior to collecting the primary data, several general managers, academics, and consultants familiar with complexity, information systems, and social media reviewed the survey measurements and survey metrics for content, wording, and understanding. Based on the feedback from these interactions, we revised the questionnaire. Then we pre-tested the duplicate tool with a sample 376 where we obtained 259 responses, with a response rate of 68.88%, (Table 1).

Business owners were our most important informants at 57.1% as they have information on all parts of the firms and their actions and plans define the support of information systems and social media to achieve companies goals and performance improvements (Baer and Frese, 2003).



In order to increase the response rate, a report summarising the results of the study was presented. We kept all individual responses strictly confidential and provided information at an aggregated level to reduce potential desirability bias. We examined the data to assess potential issues related to non-response bias and differences between early and late responders. To test for non-response bias. We found neither significant differences nor evidence of a systemic difference between early and late responders (Filion, 1975).

**Table 2.1. Technical Details of the Research**

Geographical location	Spain (Andalusia)
Methodology	Structured questionnaire
Universe of population	15,862 firms
Sample size (response size)	376 firms (259 firms, 68.88%)
Sample error	5%
Confidence level	95%, p-q=0.50; z=1.96
Period of data collection	September 2020

### 2.4.2. Measures

#### **Digital transformation:**

The research used five items developed by Nasiri *et al.* (2020) These items have been duly adapted to the present study. A seven-point Likert scale (1 “totally disagree”, 7 “totally agree”) to measure digital transformation. CFA ( $\chi^2_3 = 5,390$ , NFI = 0.99, NNFI = 0.99, GFI = 0.99, CFI = 0.99) showed that the scale was one-dimensional and had validity and reliability.

#### **Organisational learning:**

This study used a seven-point Likert scale (1 “totally disagree”, 7 “totally agree”) of four items developed by Aragón-Correa *et al.* (2006) and García-Morales *et al.* (2008) to measure

Organisational learning. These items were adapted to the present study. We performed CFA to validate the scale ( $\chi^2_1 = 1,285$ , NFI = 0.99, NNFI = 0.99, GFI = 0.99, CFI = 0.99), which demonstrated its one-dimensionality, validity, and reliability.

**Innovation:**

Many researchers analyse organisational innovation using reliable, valid scales that allow it to be measured. Drawing on a previous scale of Zahra (1993), we designed a four-item scale (1 “Totally disagree,” 7 “Totally agree”) to measure the construct. ( $\chi^2_2 = 2,881$ , NFI = .99, NNFI = .98, GFI = .99, CFI = .98, IFI = .99). This procedure yields a selection of 14 items.

**Organisational resilience:**

The study uses a scale of 12 developed by Blanco *et al.* (2017) and Notario-Pacheco *et al.* (2011), Based on the original scale made by Connor and Davidson (2003). (1 “totally disagree”, 7 “totally agree”). These items are duly adapted to the present study. The authors develop a confirmatory factor analysis to validate the scales ( $\chi^2_{11} = 12,602$ , NFI = .99, NNFI = .98, GFI = .99, CFI = .99, IFI = .99) and show that the scale is one-dimensional and has adequate validity and reliability ( $\alpha = .71$ ).

**2.5. RESULT:**

This section presents the main research results. First, Table 2 shows the means and standard deviations as well as the inter-factor correlation matrix for the study variables. Significant and positive correlations exist among digital transformational , organisational learning, innovation and organisational resilience.

**Table 2.2: Means, standard deviations and correlations.**

Descriptive Statistics										
	Mean	Std. Deviation	Level of studies	Job position	working years	Business owner	1	2	3	4
Level of studies	2.757	0.473	1							
Job position	2.537	1.005	-.165**	1						

working years	3.158	0.945	-.130*	-0.163**	1						
Business owner	3.583	2.480	0.028	-0.273	.207**	1					
1. Innovation	4.686	1.315	-0.002	0.194**	-0.142*	-0.055	1				
2. Digital transformation	4.268	1.032	-0.010	0.062	-0.099	0.040	0.379**	1			
3. Organisational learning	5.141	1.149	0.118	0.136*	-0.167*	*	-0.055	0.571**	0.415*	1	
4. Organisational resilience	5.413	.8146	0.270	0.131*	-0.107	-0.087	0.698**	0.376*	*	0.253**	1

**\*\* Correlation is significant at the 0.01 level (2-tailed).**

\*\* Correlation is significant at the 0.01 level (2-tailed). Note: S.D. = Standard Deviation,

Additionally, we find that there is a positive association between Job position, organisational resilience, learning, innovation and digital transformation. Digital transformation is a strategic choice for organisations as it impacts business operations and customer experience or creates new ways of working (Weber and Tarba, 2014). Also, the trend and adoption of digital transformation is helping organisations survive, thrive by leveraging the resources and processes needed to improve performance and gain competitiveness advantage (Viswanathan and Telukdarie, 2021).

First, we analysed the psychometric properties of the measures used in this study (Table 2), the constructs display satisfactory levels of reliability, since the composite reliabilities range from 0.93 to 0.95 and the shared variance coefficients from 0.66 to 0.77 was higher than the recommended minimum value of 0.50 (Fornell and Larcker, 1981). All factor loadings were significant ( $t > 13.71$ ) and took values higher than the recommended threshold ( $\lambda > 0.70$ ). Additionally, exploratory factor analysis was conducted for all items in the scale. A single factor emerged for each of the proposed constructs, supporting evidence of their one-dimensionality.

**Table 2. 3. Validity, reliability and internal consistency.**

		$\lambda^*$	R2	A. M.
DT1	0.876	0.767376	0.232624	$\alpha=.908$ C.R..944

DT2	0.874	0.763876	0.236124	S.V.=.705
DT3	0.861	0.741321	0.258679	
DT4	0.854	0.729316	0.270684	
DT5	0.726	0.527076	0.472924	
OL1	0.862	0.743044	0.256956	
OL2	0.888	0.788544	0.211456	$\alpha$ =.874 C.R..939 S.V.=.793
OL3	0.911	0.829921	0.170079	
OL4	0.902	0.813604	0.186396	
INN1	0.776	0.602176	0.397824	
INN2	0.844	0.712336	0.287664	$\alpha$ =.869 C.R..924 S.V.=.674
INN3	0.851	0.724201	0.275799	
INN4	0.813	0.660969	0.339031	
OR6	0.758	0.574564	0.425436	
OR7	0.734	0.538756	0.461244	$\alpha$ =.917 C.R..954 S.V.=.669
OR8	0.795	0.632025	0.367975	
OR9	0.876	0.767376	0.232624	
OR10	0.891	0.793881	0.206119	
OR11	0.847	0.717409	0.282591	
OR12	0.816	0.66586	0.33414	

Note:  $\lambda_*$ =Standardised Structural Coefficient;  $R_2$ =Reliability;  $\alpha$ = Cronbach Alpha; C. R.=Compound

Reliability; S. V.=Shared Variance; f. p.=fixed parameter; A. M.=Adjustment Measurements; \* $p$ <.05; \*\* $p$ <.01; \*\*\* $p$ <.001(two-tailed).

#### Table 2.4. Regression analysis.

Independent variables	Organisational learning		Organisational innovation				Organisational resilience			
	Coefficients (t statistics)	TOL (VIF)	Coefficients (t statistics)	TOL (VIF)	Coefficients (t statistics)	TOL (VIF)	Coefficients (t statistics)	TOL (VIF)	Coefficients (t statistics)	TOL (VIF)
	Model 1		Model 2		Model 3		Model 4		Model 5	
Constant	3.313** (3.516)		2.288** (2.977)		1.628** (2.424)		3.659** (8.527)		3.417** (9.486)	
Level of studies	0.317** (2.269)		0.052** (0.321)		-0.155** (-1.056)		-0.56** (-0.593)		0.043** (0.544)	
Job position	0.139** (2.040)		0.219** (2.748)		0.132** (1.920)		0.032** (0.689)		-0.011** (-0.285)	
Business owner	0.052*** (0.291)		0.078*** (0.371)		0.040** (0.211)		-0.10** (-0.830)		-0.113** (-1.097)	
working years	-0.114** (-1.609)		-0.113** (-1.369)		-0.058** (-0.782)		-0.005** (-0.100)		0.004** (0.091)	
DT	0.445** (7.126)	0.988 (1.012)	0.460** (6.307)	0.988 (1.012)						
OL					0.637** (10.622)	0.946 (1.058)	0.381** (9.946)	0.946 (1.058)		
INN									0.432** (15.146)	0.949 (1.053)
R2	0.21		0.18		0.34		0.31		0.49	
Adjusted R2	0.19		0.16		0.33		0.28		0.48	
F	13.65**		11.074		26.462		21.756		48.577	
Standard Error	1.02***		1.203**		1.076**		0.68**		0.58**	

Note: \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$  (two-tailed); TOL = Tolerance; VIF = Variance Inflation Factor.

Digital transformation has a positive relationship with organisational learning. As shown in (Model 1), ( $\beta=0.445$ ,  $p < .001$ ), it constitutes 21.3% of the variance in the OL. This indicates

that digital transformation contributes to enhancing organisational learning and the company's ability to survive and adopt changes.

In the second model, it was shown that DT would be positively correlated with INN. ( $\beta = 0.460$ ;  $p < .05$ ); where it accounts for 18% of the variance in INN. Therefore, H1 and H2 are supported. Also, (Model 3) shows that OL was positively related to INN ( $\beta 0.637$ ,  $p < 0.01$ ) and accounted for 34.3% of the variance of innovation. As a result, H3 is supported. H4 suggests that OL will be positively related to OR. As shown in (Model 4), OL ( $\beta 0.381$ ;  $p < 0.05$ ) had a significant positive relationship to OR and accounted for 30.1% of the variance in OR. Also, as shown in (Model 5), INN was positively related to OR ( $\beta 0.432$ ;  $p < 0.05$ ) it constitutes 49% of the variance in the OR. Thus, H4 and H5 are supported.

## **2.6. CONCLUSION.**

### **2.6.1 Discussions**

Companies that want to maintain their profitability and performance during the current environmental disruptions must adapt digital transformation based on the incorporation of digital technologies into all units of the company to create new business, new products or services or to work on the development of existing ones. Also, improving culture and customer experiences to meet changing business and market needs (Weber and Tarba, 2014). It does this through the process of organisational learning supported by digital technologies to access new knowledge, analyse it, interpret it correctly and use it, as well as innovation enhanced by this technology when changes and innovations in products, services or Business processes occur that lead to the development of the current business model or the transition to a new one.

As innovation and digital transformation influence each other, innovation through the use of digital technologies leads to a better understanding of the market and consumer needs. This increases the company's ability to generate growth and profits (Pesce *et al.*, 2019). In addition, this process helps increase organisational resilience, especially when incorporating knowledge management and information transfer into this model, which increases competitiveness (Namdarian *et al.*, 2020). An organisation's ability to learn is positively reflected in its resilience and responsiveness to change (Duchek *et al.*, 2019), as well as its use of new insights and precedents, which help foster organisational innovation (Migdadi, 2019).

From the perspective of a dynamic, capability- and resource-based view for the enterprise (RBV), the results demonstrate that digital transformation can be used to facilitate organisational resilience and that there is a possible mediation of both organisational innovation and learning to support the company's competitiveness and survival. Research results have positive effects for both scientists and practitioners. From the perspective of a dynamic, capability- and resource-based view for the enterprise (RBV), the results demonstrate that digital transformation can be used to facilitate organisational resilience and that there is a possible mediation of both organisational innovation and learning to support the company's competitiveness and survival. Research results have positive effects for both scientists and practitioners.

### **2.6.2. Implications for theory**

This study makes several theoretical contributions to the field of academic management. Through a qualitative comparison and an analysis of the available data, it was found that digital transformation is an important prerequisite for access to organisational resilience, innovation and organisational learning. And the digital transformation based on these two factors helps companies to achieve organised and high organisational resilience. The results confirm that the use of these technologies helps to improve the communication process and thus support competitive advantages and make better use of market opportunities (Bhatt and Grover, 2005). In addition, the use of digital technologies enables companies to obtain up-to-date information about the market and its trends, which can be used to quickly identify and respond to changes in customer needs (Setia et al., 2022). The results confirm that digital transformation strengthens the company's ability to act proactively and develop successful innovations. Thanks to the advanced technologies that help to acquire, interpret and use the necessary knowledge to create innovations capable of adapting to changing markets,

The results confirm that the adoption and development of digital transformation to improve organisational agility requires companies to have specific skills and an understanding of what they want to achieve with technology. This results in advantages (in terms of relationship performance). In addition, this article contributes to the knowledge of organisational resilience. On the contrary, since there is a lack of empirical studies examining the impact of digital transformation on management, many studies have focused on the impact of digital transformation on supply chain resilience (Faruquee *et al.*, 2021) and platform ecosystem resilience (Khurana *et al.*, 2022). The organisational resilience has helped to achieve

the efficiency of the system, make appropriate decisions and maintain the survival of companies. Especially in crises and turbulences like COVID-19, companies can react to market changes efficiently, quickly, cost-effectively and without disruption.

Furthermore, our results show that innovation and learning play a crucial role in mediating the relationship between digital transformation and organisational resilience. Our study shows that the resilience of organisations can be influenced by digital transformation through innovation and organisational learning. Furthermore, we have discovered that both innovation and organisational learning through digital transformation contribute to organisational resilience. The two complement each other. This relationship provides new empirical evidence for organisational intelligence and the ability to utilise resources, consistent with previous research. Digital transformation requires the use of existing skills and the exploration of new ones (Matt et al., 2015). This paper confirms that the strategic use of digital transformation drives companies to develop dynamic capabilities and deploy all available resources, resulting in higher performance.

### **2.6.3. Implications for Practice**

Our study provides important insights for practice. First, the results show that digital transformation is an institutional and organisational transformation that helps to make changes to the entire company through the introduction of new infrastructure based on digital technologies, so digital transformation must be gradual and Strategies, based on the study of the company's transformation. Second, managers need to facilitate the use of digital technologies within organisations and create an organisational context that favours the acquisition and sharing of knowledge. So that it can use its resources to take proactive steps to improve its competitiveness and gain a sustainable competitive advantage (Newbert, 2008). By improving the learning process in the company, this also contributes to innovation. Having encouraged the use of digital technologies within the organisation to transfer knowledge effectively, organisations have been able to innovate more and address the challenges faced by these small and medium-sized businesses. This result occurred particularly when sharing knowledge (Wang and Wang, 2012).

Our results show that organisational learning, resilience, innovation, and digital technologies are essential components for business survival and prosperity. As the new knowledge added to the organisational memory of the company helps to stay current, adaptable and dynamic. This is because organisational learning is essential to improve organisational



performance and maintain a source of competitive advantage (García-Morales *et al.*, 2007). As such, this knowledge also contributes to the innovation or development of products, services, and business processes that contribute to competitive advantage.

Where integrating innovation and learning into the process of digital transformation requires many managerial and technical skills (Guinan *et al.*, 2019) and induces either drastic or discontinuous changes in technology-dependent production processes (Damanpour and Daniel Wischnevsky, 2006), where innovation helps to influence SME performance and improve their financial metrics (Oura *et al.*, 2016; Ardyan, 2015). Third, organisations must develop measures to increase organisational resilience and positively influence digital transformation. This is because SME managers work effectively to manage crises and turbulence through good management of the company's resources and improve its dynamic capacity, thereby making informed decisions (Teece *et al.*, 2016). This improves the organisation's ability to adapt and thrive to perform well in times of crisis (Lee *et al.*, 2013).

#### **2.6.4. Conclusions**

The current study sheds new light on the connection between digital transformation and organisational resilience. Draw on innovation and organisational learning. First, research shows a positive relationship between digital transformation, organisational learning, and innovation. Where digital technologies provide the means to collect, analyse and transfer knowledge (Cefis, 2005), and drive the organisational learning process.

In addition, the article confirmed the existence of a positive association between digital transformation and innovation. While digital transformation refers to the changes that lead to the incorporation of digital technologies into various operations, contributing to changes in the way businesses, products, services, and business processes are conducted (Nambisan *et al.*, 2019; Fitzgerald *et al.*, 2013).

Innovation is mainly based on the creation and discovery of new ideas, practices, processes, products or services, therefore digital transformation supports innovation.

Second, the study confirmed a positive existence between organisational learning and innovation. Organisational learning is a strategic variable for companies trying to launch new products or create new markets, as they need to constantly innovate to survive intense competition (Cefis, 2005).

Finally, the study empirically proves that there is a positive connection between organisational learning, innovation and organisational resilience. As companies that learn and seek knowledge and improve their receptiveness (Nava, 2022). It allows firms to develop its capacity for innovation and develop its business activities in proportion to the turbulent markets, improving the ability of companies to respond to changes and meet the needs of their customers, giving them competitive advantages and their ability to survive (Alberti et al., 2018).

## 2.7. REFERENCES

- Agarwal, R., et al. (2010). Research Commentary-The Digital Transformation of Healthcare: Current Status and the Road Ahead. *Information Systems Research*, 21(4), 796–809. <https://doi.org/10.1287/isre.1100.0327>
- Alberti, F., Ferrario, S., & Pizzurno, E. (2018). Resilience: Resources and strategies of SMEs in a new theoretical framework. *International Journal of Learning and Intellectual Capital*, 15(2), 165. <https://doi.org/10.1504/ijlic.2018.091969>
- Ambrosini, V., & Bowman, C. (2009). What are dynamic capabilities and are they a useful construct in strategic management? *International Journal of Management Reviews*, 11(1), 29–49. <https://doi.org/10.1111/j.1468-2370.2008.00251.x>
- Aragón-Correa, J. A., Morales, V. J. G., & Pozo, E. C. (2007). Leadership and organizational learning's role on innovation and performance: Lessons from Spain. *Industrial Marketing Management*, 36(3), 349–359. <https://doi.org/10.1016/j.indmarman.2005.09.006>
- Ardyan, E. (2015). Market sensing capability, entrepreneurial orientation, product innovativeness success, speed to market and SMES performance. *International Journal of Business Intelligence Research*, 6(2), 18–32. <https://doi.org/10.4018/ijbir.2015070102>
- Argote, L., & Ingram, P. (2000). Knowledge transfer: A basis for competitive advantage in firms. *Organizational Behavior and Human Decision Processes*, 82(1), 150–169. <https://doi.org/10.1006/obhd.2000.2893>
- Baer, M., & Frese, M. (2002). Innovation is not enough: Climates for initiative and psychological safety, process innovations, and firm performance. *Journal of Organizational Behavior*, 24(1), 45–68. <https://doi.org/10.1002/job.179>

- Bahadur, A., Ibrahim, M., & Tanner, T. (2013). Characterising resilience: Unpacking the concept for tackling climate change and development. *Climate and Development*, 5(1), 55–65. <https://doi.org/10.1080/17565529.2012.762334>
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191–215. <https://doi.org/10.1037/0033-295x.84.2.191>
- Barber, K., Studer, L., & Fattahi, F. (2019). Derivation of enteric neuron lineages from human pluripotent stem cells. *Nature Protocols*, 14(4), 1261–1279. <https://doi.org/10.1038/s41596-019-0141-y>
- Baregheh, A., Rowley, J., & Sambrook, S. (2009). Towards a multidisciplinary definition of innovation. *Management Decision*, 47(8), 1323–1339. <https://doi.org/10.1108/00251740910984578>
- Bhamra, R., Dani, S., & Burnard, K. (2011). Resilience: The concept, a literature review and future directions. *International Journal of Production Research*, 49(18), 5375–5393. <https://doi.org/10.1080/00207543.2011.563826>
- Bharadwaj, A., et al. (2013). Digital Business Strategy: Toward a next generation of insights. *Management Information Systems Quarterly*, 37(2), 471–482. <https://doi.org/10.25300/misq/2013/37:2.3>
- Bhatt, G. D., & Grover, V. (2005). Types of Information Technology Capabilities and their Role in Competitive Advantage: An Empirical study. *Journal of Management Information Systems*, 22(2), 253–277. <https://doi.org/10.1080/07421222.2005.11045844>
- Blanco, V., et al. (2017). Spanish validation of the 10-item Connor–Davidson Resilience Scale (CD-RISC 10) with non-professional caregivers. *Aging & Mental Health*, 23(2), 183–188. <https://doi.org/10.1080/13607863.2017.1399340>
- Bolívar-Ramos, M. T., Morales, V. J. G., & García-Sánchez, E. (2012). Technological distinctive competencies and organizational learning: Effects on organizational innovation to improve firm performance. *Journal of Engineering and Technology Management*, 29(3), 331–357. <https://doi.org/10.1016/j.jengtecman.2012.03.006>
- Brockman, B. K., & Morgan, R. M. (2003). The role of existing knowledge in new product innovativeness and performance. *Decision Sciences*, 34(2), 385–419. <https://doi.org/10.1111/1540-5915.02326>
- Bustanza, O. F., et al. (2016a). Technological capabilities, resilience capabilities and organizational effectiveness. *International Journal of Human Resource Management*, 30(8), 1370–1392. <https://doi.org/10.1080/09585192.2016.1216878>

- Bustinza, O. F., et al. (2016b). Technological capabilities, resilience capabilities and organizational effectiveness. *International Journal of Human Resource Management*, 30(8), 1370–1392. <https://doi.org/10.1080/09585192.2016.1216878>
- Castellacci, F. (2015). Institutional voids or organizational resilience? Business groups, innovation, and market development in Latin America. *World Development*, 70, 43–58. <https://doi.org/10.1016/j.worlddev.2014.12.014>
- Cefis, E., & Marsili, O. (2005). A matter of life and death: Innovation and firm survival. *Industrial and Corporate Change*, 14(6), 1167–1192. <https://doi.org/10.1093/icc/dth081>
- Chiva, R., Ghauri, P. N., & Alegre, J. (2013). Organizational Learning, Innovation and Internationalization: A complex system model. *British Journal of Management*, 25(4), 687–705. <https://doi.org/10.1111/1467-8551.12026>
- Cohen, W. M., & Levinthal, D. A. (1990). Absorptive Capacity: A new perspective on learning and innovation. *Administrative Science Quarterly*, 35(1), 128. <https://doi.org/10.2307/2393553>
- Crossan, M., & Berdrow, I. (2003). Organizational learning and strategic renewal. *Strategic Management Journal*, 24(11), 1087–1105. <https://doi.org/10.1002/smj.342>
- Daft, R. L. (1978). A Dual-Core model of organizational innovation. *Academy of Management Journal*, 21(2), 193–210. <https://doi.org/10.2307/255754>
- Damanpour, F., & Gopalakrishnan, S. (1998). Theories of organizational structure and innovation adoption: The role of environmental change. *Journal of Engineering and Technology Management*, 15(1), 1–24. [https://doi.org/10.1016/s0923-4748\(97\)00029-5](https://doi.org/10.1016/s0923-4748(97)00029-5)
- Damanpour, F., & Wischnevsky, J. D. (2006). Research on innovation in organizations: Distinguishing innovation-generating from innovation-adopting organizations. *Journal of Engineering and Technology Management*, 23(4), 269–291. <https://doi.org/10.1016/j.jengtecman.2006.08.002>
- Davila, A., Foster, G., & Oyon, D. (2009). Accounting and Control, Entrepreneurship and Innovation: Venturing into New Research Opportunities. *European Accounting Review*, 18(2), 281–311. <https://doi.org/10.1080/09638180902731455>
- De Carvalho, A. O., et al. (2016). Organizational resilience: A comparative study between innovative and non-innovative companies based on the financial performance analysis. *International Journal of Innovation*, 4(1), 58–69. <https://doi.org/10.5585/iji.v4i1.73>
- Dekoulou, P., & Trivellas, P. (2014). Learning organization in Greek advertising and media Industry: A way to face crisis and gain sustainable competitive advantage. *Procedia -*

<https://doi.org/10.1016/j.sbspro.2014.07.051>

- Díaz-Chao, Á., Sainz, J., & Torrent-Sellens, J. (2015). ICT, innovation, and firm productivity: New evidence from small local firms. *Journal of Business Research*, 68(7), 1439–1444. <https://doi.org/10.1016/j.jbusres.2015.01.030>
- Do, H., et al. (2022). Building organizational resilience, innovation through resource-based management initiatives, organizational learning and environmental dynamism. *Journal of Business Research*, 141, 808–821. <https://doi.org/10.1016/j.jbusres.2021.11.090>
- Duchek, S. (2019). Organizational resilience: A capability-based conceptualization. *Business Research*, 13(1), 215–246. <https://doi.org/10.1007/s40685-019-0085-7>
- Dwyer, S. M., et al. (2021). Building Organizational Resilience: How digital transformation creates value in a crisis. *Proceedings - Academy of Management*, 2021(1), 15980. <https://doi.org/10.5465/ambpp.2021.15980abstract>
- Easterby-Smith, M., & Prieto, I. M. (2008). Dynamic capabilities and knowledge management: An integrative role for learning? *British Journal of Management*, 19(3), 235–249. <https://doi.org/10.1111/j.1467-8551.2007.00543.x>
- Ebert, C., & Duarte, C. H. C. (2018). Digital transformation. *IEEE Software*, 35(4), 16–21. <https://doi.org/10.1109/ms.2018.2801537>
- Faruquee, M., Paulraj, A., & Irawan, C. A. (2021). Strategic supplier relationships and supply chain resilience: Is digital transformation that precludes trust beneficial? *International Journal of Operations & Production Management*, 41(7), 1192–1219. <https://doi.org/10.1108/ijopm-10-2020-0702>
- Filion, F. L. (1975). Estimating bias due to nonresponse in mail surveys. *Public Opinion Quarterly*, 39(4), 482. <https://doi.org/10.1086/268245>
- Fiol, C. M., & Lyles, M. A. (1985). Organizational learning. *Academy of Management Review*, 10(4), 803–813. <https://doi.org/10.5465/amr.1985.4279103>
- Firestone, J. M., & McElroy, M. W. (2005). Doing knowledge management. *The Learning Organization*, 12(2), 189–212. <https://doi.org/10.1108/09696470510583557>
- Fornell, C., & Larcker, D. F. (1981). Structural equation models with unobservable variables and measurement error: Algebra and statistics. *Journal of Marketing Research*, 18(3), 382. <https://doi.org/10.2307/3150980>
- Francis, D., & Bessant, J. (2005). Targeting innovation and implications for capability development. *Technovation*, 25(3), 171–183. <https://doi.org/10.1016/j.technovation.2004.03.004>

- Garvin, D. A. (2021). Is yours a learning organization? Retrieved from <https://hbr.org/2008/03/is-yours-a-learning-organization>
- Goh, S. C., & Richards, G. (1997). Benchmarking the learning capability of organizations. *European Management Journal*, 15(5), 575–583. [https://doi.org/10.1016/s0263-2373\(97\)00036-4](https://doi.org/10.1016/s0263-2373(97)00036-4)
- Guinan, P. J., Parise, S., & Langowitz, N. S. (2019). Creating an innovative digital project team: Levers to enable digital transformation. *Business Horizons*, 62(6), 717–727. <https://doi.org/10.1016/j.bushor.2019.07.005>
- Hagedoorn, J. (1996). Innovation and Entrepreneurship: Schumpeter Revisited. *Industrial and Corporate Change*, 5(3), 883–896. <https://doi.org/10.1093/icc/5.3.883>
- Helfat, C. E., & Peteraf, M. A. (2014). Managerial cognitive capabilities and the microfoundations of dynamic capabilities. *Strategic Management Journal*, 36(6), 831–850. <https://doi.org/10.1002/smj.2247>
- Hillmann, J., & Guenther, E. (2020). Organizational resilience: A valuable construct for management research? *International Journal of Management Reviews*, 23(1), 7–44. <https://doi.org/10.1111/ijmr.12239>
- Hinings, B., Gegenhuber, T., & Greenwood, R. (2018). Digital innovation and transformation: An institutional perspective. *Information and Organization*, 28(1), 52–61. <https://doi.org/10.1016/j.infoandorg.2018.02.004>
- Hollan, J. D., Hutchins, E., & Kirsh, D. (2000). Distributed cognition. *ACM Transactions on Computer-Human Interaction*, 7(2), 174–196. <https://doi.org/10.1145/353485.353487>
- Horváth, D., & Szabó, R. Z. (2019a). Driving forces and barriers of Industry 4.0: Do multinational and small and medium-sized companies have equal opportunities? *Technological Forecasting and Social Change*, 146, 119–132. <https://doi.org/10.1016/j.techfore.2019.05.021>
- Horváth, D., & Szabó, R. Z. (2019b). Driving forces and barriers of Industry 4.0: Do multinational and small and medium-sized companies have equal opportunities? *Technological Forecasting and Social Change*, 146, 119–132. <https://doi.org/10.1016/j.techfore.2019.05.021>
- Huang, J. C., et al. (2017). Growing on Steroids: Rapidly scaling the user base of digital ventures through digital innovation. *Management Information Systems Quarterly*, 41(1), 301–314. <https://doi.org/10.25300/misq/2017/41.1.16>

- Hurley, R. F., & Hult, G. T. M. (1998). Innovation, Market Orientation, and Organizational Learning: An integration and Empirical Examination. *Journal of Marketing*, 62(3), 42–54. <https://doi.org/10.1177/002224299806200303>
- Jarrahi, M. H., & Sawyer, S. (2013a). Social technologies, informal knowledge practices, and the enterprise. *Journal of Organizational Computing and Electronic Commerce*, 23(1–2), 110–137. <https://doi.org/10.1080/10919392.2013.748613>
- Jarrahi, M. H., & Sawyer, S. (2013b). Social technologies, informal knowledge practices, and the enterprise. *Journal of Organizational Computing and Electronic Commerce*, 23(1–2), 110–137. <https://doi.org/10.1080/10919392.2013.748613>
- Johnson, A. F., Rauhaus, B. M., & Webb-Farley, K. (2020). The COVID-19 pandemic: A challenge for US nonprofits' financial stability. *Journal of Public Budgeting, Accounting & Financial Management*, 33(1), 33–46. <https://doi.org/10.1108/jpbafm-06-2020-0076>
- Kafashpoor, A., et al. (2013). A study on the mediating role of organizational learning on the relationship between market orientation and organizational performance. *Management Science Letters*, 3(7), 1967–1976. <https://doi.org/10.5267/j.msl.2013.06.029>
- Kantur, D. (2015). Measuring organizational resilience: A scale development. *Journal of Business, Economics and Finance*, 4(3), 456. <https://doi.org/10.17261/pressacademia.2015313066>
- Khurana, I., Dutta, D. K., & Ghura, A. S. (2022). SMEs and digital transformation during a crisis: The emergence of resilience as a second-order dynamic capability in an entrepreneurial ecosystem. *Journal of Business Research*, 150, 623–641. <https://doi.org/10.1016/j.jbusres.2022.06.048>
- Klein, V., & Todesco, J. L. (2021). COVID-19 crisis and SMEs responses: The role of digital transformation. *Knowledge and Process Management*, 28(2), 117–133. <https://doi.org/10.1002/kpm.1660>
- Leão, P., & Da Silva, M. M. (2021). Impacts of digital transformation on firms' competitive advantages: A systematic literature review. *Strategic Change*, 30(5), 421–441. <https://doi.org/10.1002/jsc.2459>
- Lengnick-Hall, C. A., Beck, T. E., & Lengnick-Hall, M. L. (2011). Developing a capacity for organizational resilience through strategic human resource management. *Human Resource Management Review*, 21(3), 243–255. <https://doi.org/10.1016/j.hrmr.2010.07.001>

- Li, F. (2020). Leading digital transformation: Three emerging approaches for managing the transition. *International Journal of Operations & Production Management*, 40(6), 809–817. <https://doi.org/10.1108/ijopm-04-2020-0202>
- Liu, D.-Y., Chen, S., & Chou, T.-C. (2011). Resource fit in digital transformation. *Management Decision*, 49(10), 1728–1742. <https://doi.org/10.1108/00251741111183852>
- Liu, Y., & Yin, J. (2020). Stakeholder relationships and organizational resilience. *Management and Organization Review*, 16(5), 986–990. <https://doi.org/10.1017/mor.2020.58>
- Lozano, R. (2011). Creativity and organizational learning as means to foster sustainability. *Sustainable Development*, 22(3), 205–216. <https://doi.org/10.1002/sd.540>
- Ma, Z., Xiao, L., & Yin, J. (2018). Toward a dynamic model of organizational resilience. *Nankai Business Review International*, 9(3), 246–263. <https://doi.org/10.1108/nbri-07-2017-0041>
- Makadok, R. (2001). Toward a synthesis of the resource-based and dynamic-capability views of rent creation. *Strategic Management Journal*, 22(5), 387–401. <https://doi.org/10.1002/smj.158>
- March, J. G. (1991). Exploration and exploitation in organizational learning. *Organization Science*, 2(1), 71–87. <https://doi.org/10.1287/orsc.2.1.71>
- Markman, G. M., & Venzin, M. (2014). Resilience: Lessons from banks that have braved the economic crisis—And from those that have not. *International Business Review*, 23(6), 1096–1107. <https://doi.org/10.1016/j.ibusrev.2014.06.013>
- Martín, M. A. G., Castaño-Martínez, M.-S., & Méndez-Picazo, M.-T. (2019a). Digital transformation, digital dividends and entrepreneurship: A quantitative analysis. *Journal of Business Research*, 101, 522–527. <https://doi.org/10.1016/j.jbusres.2018.12.014>
- Martín, M. A. G., Castaño-Martínez, M.-S., & Méndez-Picazo, M.-T. (2019b). Digital transformation, digital dividends and entrepreneurship: A quantitative analysis. *Journal of Business Research*, 101, 522–527. <https://doi.org/10.1016/j.jbusres.2018.12.014>
- Matos, F., et al. (2022). Organisational resilience in the Digital Age: Management Strategies and Practices. In *Contributions to Management Science*, pp. 59–70. [https://doi.org/10.1007/978-3-030-85954-1\\_5](https://doi.org/10.1007/978-3-030-85954-1_5)
- Matt, C., Hess, T., & Benlian, A. (2015). Digital Transformation Strategies. *Business & Information Systems Engineering*, 57(5), 339–343. <https://doi.org/10.1007/s12599-015-0401-5>
- Matzler, K., et al. (2018). The crusade of digital disruption. *Journal of Business Strategy*, 39(6), 13–20. <https://doi.org/10.1108/jbs-12-2017-0187>



- Mezias, S. J., & Glynn, M. A. (1993). The three faces of corporate renewal: Institution, revolution, and evolution. *Strategic Management Journal*, 14(2), 77–101. <https://doi.org/10.1002/smj.4250140202>
- Migdadi, M. M. (2019). Organizational learning capability, innovation and organizational performance. *European Journal of Innovation Management*, 24(1), 151–172. <https://doi.org/10.1108/ejim-11-2018-0246>
- Morales, V. J. G., Moreno, A. R., & Montes, F. J. L. (2007). Effects of technology absorptive capacity and technology proactivity on organizational learning, innovation and performance: An empirical examination. *Technology Analysis & Strategic Management*, 19(4), 527–558. <https://doi.org/10.1080/09537320701403540>
- Muninger, M.-I., Hammedi, W., & Mahr, D. (2019). The value of social media for innovation: A capability perspective. *Journal of Business Research*, 95, 116–127. <https://doi.org/10.1016/j.jbusres.2018.10.012>
- Nambisan, S., et al. (2017). Digital Innovation Management: Reinventing innovation management research in a digital world. *Management Information Systems Quarterly*, 41(1), 223–238. <https://doi.org/10.25300/misq/2017/41:1.03>
- Nambisan, S., Wright, M., & Feldman, M. P. (2019). The digital transformation of innovation and entrepreneurship: Progress, challenges and key themes. *Research Policy*, 48(8), p. 103773. <https://doi.org/10.1016/j.respol.2019.03.018>
- Namdarian, L., Sajedinejad, A., & Bahanesteh, S. (2020). The Impact of knowledge Management on Organizational Performance: A Structural equation Modeling study. *AD-minister*, (37), 85–108. <https://doi.org/10.17230/ad-minister.37.4>
- Nasiri, M., et al. (2020). Managing the digital supply chain: The role of smart technologies. *Technovation*, 96–97, p. 102121. <https://doi.org/10.1016/j.technovation.2020.102121>
- Nava, L. (2022). Rise from ashes: A dynamic framework of organizational learning and resilience in disaster response. *Business and Society Review*, 127(S1), 299–318. <https://doi.org/10.1111/basr.12261>
- Nelson, R. R., & W. S. G. (1982). The Schumpeterian Tradeoff Revisited. *ideas.repec.org* [Preprint]. Available at: <https://ideas.repec.org/a/aea/aecrev/v72y1982i1p114-32.html>
- Newbert, S. L. (2006). Empirical research on the resource-based view of the firm: An assessment and suggestions for future research. *Strategic Management Journal*, 28(2), 121–146. <https://doi.org/10.1002/smj.573>

- Newbert, S. L. (2008). Value, rareness, competitive advantage, and performance: A conceptual-level empirical investigation of the resource-based view of the firm. *Strategic Management Journal*, 29(7), 745–768. <https://doi.org/10.1002/smj.686>
- Nikpour, A. (2017). The impact of organizational culture on organizational performance: The mediating role of employee's organizational commitment. *International Journal of Organizational Leadership*, 6(1), 65–72. <https://doi.org/10.33844/ijol.2017.60432>
- O'Cass, A., & Sok, P. (2013). The role of intellectual resources, product innovation capability, reputational resources and marketing capability combinations in firm growth. *International Small Business Journal*, 32(8), 996–1018. <https://doi.org/10.1177/0266242613480225>
- Oltra-Badenes, R., & Lozano-Quilis, J. A. (2020). Customer relationship management: digital transformation and sustainable business model innovation. *Ekonomika Istrazivanja-economic Research*, 33(1), 2733–2750. <https://doi.org/10.1080/1331677x.2019.1676283>
- Orth, D., & Schuldis, P. M. (2021). Organizational learning and unlearning capabilities for resilience during COVID-19. *The Learning Organization*, 28(6), 509–522. <https://doi.org/10.1108/tlo-07-2020-0130>
- Oura, M. M., Zilber, S. N., & Lopes, E. L. (2016). Innovation capacity, international experience and export performance of SMEs in Brazil. *International Business Review*, 25(4), 921–932. <https://doi.org/10.1016/j.ibusrev.2015.12.002>
- Pesce, D., Neirotti, P., & Paolucci, E. (2019). When culture meets digital platforms: value creation and stakeholders' alignment in big data use. *Current Issues in Tourism*, 22(15), 1883–1903. <https://doi.org/10.1080/13683500.2019.1591354>
- Peteraf, M. A. (1993). The cornerstones of competitive advantage: A resource-based view. *Strategic Management Journal*, 14(3), 179–191. <https://doi.org/10.1002/smj.4250140303>
- Raj, A., et al. (2022). Supply chain management during and post-COVID-19 pandemic: Mitigation strategies and practical lessons learned. *Journal of Business Research*, 142, 1125–1139. <https://doi.org/10.1016/j.jbusres.2022.01.037>
- Ravindran, T., & Boh, W. F. (2020). Lessons from COVID-19: Toward a Pandemic Readiness Audit Checklist for Small and Medium-Sized Enterprises. *IEEE Engineering Management Review*, 48(3), 55–62. <https://doi.org/10.1109/emr.2020.3015488>
- Ray, G., Barney, J. B., & Muhanna, W. A. (2003). Capabilities, business processes, and competitive advantage: Choosing the dependent variable in empirical tests of the

- resource-based view. *Strategic Management Journal*, 25(1), 23–37.  
<https://doi.org/10.1002/smj.366>
- Razmerita, L., Kirchner, K., & Nabeth, T. (2014a). Social media in Organizations: Leveraging personal and collective knowledge processes. *Journal of Organizational Computing and Electronic Commerce*, 24(1), 74–93. <https://doi.org/10.1080/10919392.2014.866504>
- Razmerita, L., Kirchner, K., & Nabeth, T. (2014b). Social media in Organizations: Leveraging personal and collective knowledge processes. *Journal of Organizational Computing and Electronic Commerce*, 24(1), 74–93. <https://doi.org/10.1080/10919392.2014.866504>
- Roberts, P., & Amit, R. (2003). The dynamics of innovative activity and Competitive Advantage: The case of Australian Retail Banking, 1981 to 1995. *Organization Science*, 14(2), 107–122. <https://doi.org/10.1287/orsc.14.2.107.1499>
- Robertson, J., et al. (2022). Fortune favours the digitally mature: the impact of digital maturity on the organisational resilience of SME retailers during COVID-19. *International Journal of Retail & Distribution Management*, 50(8), 1182–1204. <https://doi.org/10.1108/ijrdm-10-2021-0514>
- Robertson, J., et al. (2022c). Fortune favours the digitally mature: the impact of digital maturity on the organisational resilience of SME retailers during COVID-19. *International Journal of Retail & Distribution Management*, 50(8/9), 1182–1204. <https://doi.org/10.1108/ijrdm-10-2021-0514>
- Rosenbusch, N., Brinckmann, J., & Bausch, A. (2011). Is innovation always beneficial? A meta-analysis of the relationship between innovation and performance in SMEs. *Journal of Business Venturing*, 26(4), 441–457. <https://doi.org/10.1016/j.jbusvent.2009.12.002>
- Salavou, H., Baltas, G., & Lioukas, S. (2004). Organisational innovation in SMEs. *European Journal of Marketing*, 38(9/10), 1091–1112. <https://doi.org/10.1108/03090560410548889>
- Schallmo, D. R. A., Williams, C. A., & Lohse, J. (2019). DIGITAL STRATEGY — INTEGRATED APPROACH AND GENERIC OPTIONS. *International Journal of Innovation Management*, 23(08), 1940005. <https://doi.org/10.1142/s136391961940005x>
- Setia, P., Venkatesh, V., & Joglekar, S. (2022). Leveraging Digital Technologies: How information quality leads to localized capabilities and customer service performance. *Social Science Research Network [Preprint]*. <https://doi.org/10.2139/ssrn.4060248>
- Sgobbi, F., & Codara, L. (2022). Resilience capability and Successful adoption of digital Technologies: Two case studies. In *Springer eBooks*, 309–327. [https://doi.org/10.1007/978-3-030-85954-1\\_18](https://doi.org/10.1007/978-3-030-85954-1_18)

- Shipton, H., et al. (2017). HRM and innovation: looking across levels. *Human Resource Management Journal*, 27(2), 246–263. <https://doi.org/10.1111/1748-8583.12102>
- Song, M. (2006). Conflict Management and Innovation Performance: An Integrated Contingency Perspective. *Journal of the Academy of Marketing Science*, 34(3), 341–356. <https://doi.org/10.1177/0092070306286705>
- Srikalimah, S., et al. (2020). Do creativity and intellectual capital matter for SMEs Sustainability? The role of competitive advantage. *The Journal of Asian Finance, Economics and Business*, 7(12), 397–408. <https://doi.org/10.13106/jafeb.2020.vol7.no12.397>
- Szeto, E. (2000). Innovation capacity: working towards a mechanism for improving innovation within an inter-organizational network. *The TQM Magazine*, 12(2), 149–158. <https://doi.org/10.1108/09544780010318415>
- Teece, D. J., Peteraf, M. A., & Leih, S. (2016). Dynamic capabilities and organizational agility: risk, uncertainty, and strategy in the innovation economy. *California Management Review*, 58(4), 13–35. <https://doi.org/10.1525/cmr.2016.58.4.13>
- Trindade, D. F. G., et al. (2012). Challenges of knowledge management and creation in communities of practice organizations of Deaf and non-Deaf members: requirements for a Web platform. *Behaviour & Information Technology*, 31(8), 799–810. <https://doi.org/10.1080/0144929x.2011.650712>
- Tukamuhabwa, B., et al. (2015). Supply chain resilience: definition, review and theoretical foundations for further study. *International Journal of Production Research*, 53(18), 5592–5623. <https://doi.org/10.1080/00207543.2015.1037934>
- Ulaş, D. (2019). Digital Transformation process and SMEs. *Procedia Computer Science*, 158, 662–671. <https://doi.org/10.1016/j.procs.2019.09.101>
- Vakola, M., & Rezgui, Y. (2000). Organisational learning and innovation in the construction industry. *The Learning Organization*, 7(4), 174–184. <https://doi.org/10.1108/09696470010342324>
- Van Der Merwe, J., & Achkar, Z. A. (2022). Data responsibility, corporate social responsibility, and corporate digital responsibility. *Data & Policy*, 4. <https://doi.org/10.1017/dap.2022.2>
- Van Der Vegt, G. S., et al. (2015). Managing risk and resilience. *Academy of Management Journal*, 58(4), 971–980. <https://doi.org/10.5465/amj.2015.4004>
- Vega-Jurado, J., Gutiérrez-Gracia, A., & Fernández-De-Lucio, I. (2009). Does external knowledge sourcing matter for innovation? Evidence from the Spanish manufacturing

- industry. *Industrial and Corporate Change*, 18(4), 637–670.  
<https://doi.org/10.1093/icc/dtp023>
- Verganti, R., & Shani, A. B. (2016). Vision transformation through radical circles. *Organizational Dynamics*, 45(2), 104–113. <https://doi.org/10.1016/j.orgdyn.2016.02.004>
- Verhoef, P. C., et al. (2021). Digital transformation: A multidisciplinary reflection and research agenda. *Journal of Business Research*, 122, 889–901.  
<https://doi.org/10.1016/j.jbusres.2019.09.022>
- Vial, G. (2019). Understanding digital transformation: A review and a research agenda. *Journal of Strategic Information Systems*, 28(2), 118–144.  
<https://doi.org/10.1016/j.jsis.2019.01.003>
- Viswanathan, R., & Telukdarie, A. (2021). A systems dynamics approach to SME digitalization. *Procedia Computer Science*, 180, 816–824.  
<https://doi.org/10.1016/j.procs.2021.01.331>
- Vogelsang, K., et al. (2018). Success factors for fostering a digital transformation in manufacturing companies. *Journal of Enterprise Transformation*, 8(1–2), 121–142.  
<https://doi.org/10.1080/19488289.2019.1578839>
- Vogus, T. J., & Sutcliffe, K. M. (2007). Organizational resilience: Towards a theory and research agenda. *Man And Cybernetics* [Preprint].  
<https://doi.org/10.1109/icsmc.2007.4414160>
- Von Leipzig, T., et al. (2017a). Initialising customer-orientated digital transformation in enterprises. *Procedia Manufacturing*, 8, 517–524.  
<https://doi.org/10.1016/j.promfg.2017.02.066>
- Von Leipzig, T., et al. (2017b). Initialising customer-orientated digital transformation in enterprises. *Procedia Manufacturing*, 8, 517–524.  
<https://doi.org/10.1016/j.promfg.2017.02.066>
- Wang, Z., & Wang, N. (2012). Knowledge sharing, innovation and firm performance. *Expert Systems With Applications*, 39(10), 8899–8908.  
<https://doi.org/10.1016/j.eswa.2012.02.017>
- Weber, Y., & Tarba, S. Y. (2014). Strategic Agility: A state of the art introduction to the special section on Strategic Agility. *California Management Review*, 56(3), 5–12.  
<https://doi.org/10.1525/cm.2014.56.3.5>
- Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic Management Journal*, 5(2), 171–180. <https://doi.org/10.1002/smj.4250050207>

- Wessel, L., et al. (2021). Unpacking the difference between digital transformation and IT-Enabled organizational transformation. *Journal of the Association for Information Systems*, 22(1), 102–129. <https://doi.org/10.17705/1jais.00655>
- Wotherspoon, R., Mannion, C., & Harlow, R. E. A. (2020). Maintaining medical team communication using video conferencing during the COVID-19 lockdown. *British Journal of Oral & Maxillofacial Surgery*, 58(10), e326–e327. <https://doi.org/10.1016/j.bjoms.2020.08.114>
- Wu, T., et al. (2021). Enable digital transformation: entrepreneurial leadership, ambidextrous learning and organisational performance. *Technology Analysis & Strategic Management*, 33(12), 1389–1403. <https://doi.org/10.1080/09537325.2021.1876220>
- Xie, X., et al. (2022). Business networks and organizational resilience capacity in the digital age during COVID-19: A perspective utilizing organizational information processing theory. *Technological Forecasting and Social Change*, 177, 121548. <https://doi.org/10.1016/j.techfore.2022.121548>
- Yoo, Y., Henfridsson, O., & Lyytinen, K. (2010). Research Commentary—The New Organizing Logic of Digital Innovation: An Agenda for Information Systems Research. *Information Systems Research*, 21(4), 724–735. <https://doi.org/10.1287/isre.1100.0322>
- Yu, J. E. (2004). Reconsidering participatory action research for organizational transformation and social change. *Journal of Organisational Transformation & Social Change*, 1(2), 111–141. <https://doi.org/10.1386/jots.1.2.111/0>
- Zahra, S. A. (1993). Environment, corporate entrepreneurship, and financial performance: A taxonomic approach. *Journal of Business Venturing*, 8(4), 319–340. [https://doi.org/10.1016/0883-9026\(93\)90003-n](https://doi.org/10.1016/0883-9026(93)90003-n)
- Zollo, M., & Winter, S. G. (2002). Deliberate learning and the evolution of dynamic capabilities. *Organization Science*, 13(3), 339–351. <https://doi.org/10.1287/orsc.13.3.339.2780>

# *Capítulo 3*

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# **3. THE ROLE OF DIGITAL TECHNOLOGIES IN FOSTERING ORGANISATIONAL RESILIENCE THROUGH ENTREPRENEURIAL ORIENTATION: A MINI REVIEW**

## **3.1. ABSTRACT**

In light of the current business landscape, which is characterised by intense competition, globalisation and rapid technological progress. Digital technologies are considered a critical enabling factor for developing an entrepreneurial strategy, as well as creating innovative products and services that respond to evolving market requirements. Thus enhancing the competitiveness of companies and enhancing their flexibility in responding to rapid changes. In this summary review we highlight the role of digital technologies supported by entrepreneurial orientation on the organisational resilience of Small and Medium Enterprises (SMEs). This mini review contributes to the understanding of how these enterprises can leverage an entrepreneurial mindset and digital technologies to enhance their flexibility and maintain their competitive advantage in today's dynamic business environment. A focused narrative review based on prior findings has been conducted, and future research directions are discussed.

**Keywords:** Organisational resilience, entrepreneurial orientation, digital technologies, digital leadership, organisational culture.

## **3.2. INTRODUCTION**

The COVID-19 pandemic has caused serious health and economic disruptions, leaving companies constantly operating in an increasingly turbulent and uncertain business environment (Van der Vegt et al., 2015). Therefore, companies need to improve their organisational resilience and be more innovative in order to survive and thrive (Liu and Yin, 2020 ).

Because resilient contributes quickly to decision-making and developing alternatives to deal with the turbulent environment (Kantur, 2015). This, in turn, contributes to business survival and thus organisational resilience (OR), which can be defined as the ability of an organisation to anticipate and manage unexpected disruptions, serving as an essential feature of proactivity that requires taking risks to determine the best way to recover from disruptions and serves as a basis for innovation (Duchek, 2020).



As for Small and Medium Enterprises (SMEs), they are affected by the pandemic due to their limited resources (Susanty et al., 2022). Therefore, Small and Medium-sized Companies can deal with disturbances, adapt to rapid changes, and innovate ways and means to maintain their continuity and survive. It needs to integrate entrepreneurial orientation (EO) into its strategy, to succeed in modern competitive markets, because (EO) contributes to enhancing the ability to innovate, seek risks, and be proactive in identifying new market opportunities (Lumpkin & Dess, 1996). Entrepreneurial orientation has been defined in different ways by scholars. For example, Zahra (1993) described EO as a firm's strategic position that focuses on processes, practices, and decision-making methods to achieve superior performance.

Digital technologies (DT) are classified as a vital factor to improve innovation and the ability of companies to respond to changes and adapt to rapid changes in market trends (Do et al., 2021). They refer to the knowledge, skills, and know-how to create, manipulate, transmit, and use digital data as well as practical implementation systems and procedures (Andre et al., 2018). It includes a wide range of technologies, tools, services, and applications that include social media, big data, mobile solution technologies, cloud, artificial intelligence (AI), Internet of Things (IOT), and big data blockchain (Nambisan, 2017; Si et al., 2022). DT has been embraced by many entrepreneurs, such as Alibaba.com, leading to the creation of new jobs and an increase in the number of Chinese entrepreneurs (Jean et al., 2021). Investing in appropriate technologies can influence how entrepreneurship is configured to achieve high performance.

In this mini-review, we highlight the role of digital technologies in enhancing organisational flexibility through entrepreneurial orientation. Furthermore, future trends are discussed. Accordingly, the impact of digital technologies on entrepreneurial orientation was studied. At present, the limited results do not allow for a systematic meta-analysis. Thus, a focused narrative review was selected based on recent findings of the relationship between variables.

### **3.3. METHODOLOGY**

In this paper, previous studies were searched as follows. Firstly, in Web of Science, the following search parameters were used to search for previous studies: EO = [(“Entrepreneurship orientation” or “Entrepreneurship companies”) and (“Digital technologies” or “Digital transformation” or “New technologies” or “new technology”) and (organisational resilience or “performance recovery” or “handling disruption” or “business strategy

resilience”)]. Only studies examining associations or modelling between digital technologies and entrepreneurial orientation in enhancing regulatory ergonomics were hand-selected. In addition, previous studies examining the association or modelling between digital technologies and entrepreneurial orientation were extracted from these reference lists of the studies used in this study.

## **3.4. RESULT**

### **3.4.1. Digital technology and entrepreneurial orientation**

Digital technologies have become increasingly important for entrepreneurship, providing various levels of benefits for businesses such as digital products or services, tools and equipment, platforms, and infrastructures (Elia et al., 2020). These technologies have also impacted entrepreneurship orientation, which is defined as a multidimensional concept encompassing innovation, proactivity, and risk-taking (Covin & Slevin, 1989; Rigtering & Behrens, 2021). Innovativeness refers to a company's ability to provide competitive new products and services, proactivity relates to a company's strategy of seeking out opportunities that can be capitalised on both now and in the future, and risk-taking is defined as using a company's resources to make significant resource commitments with a reasonable chance of failure and an uncertain outcome (Zahra, 1993).

By adopting digital technologies and integrating them into a company's strategy, entrepreneurship orientation can be promoted, leading to innovative and risk-taking behaviour (Si et al., 2022). Digital technologies can provide various opportunities for companies, increasing their chance of encountering high-quality opportunities with great potential (Jean et al., 2021). Therefore, digitization can influence how entrepreneurship orientation is configured to achieve high performance by investing in the right technologies (Lumpkin & Dess, 1996).

Based on the literature reviews, it can be summarised that the use of digital technologies has a positive effect on entrepreneurship orientation (Zahra et al., 2022). This leads to increased innovation, proactivity, and risk-taking behaviour, which ultimately leads to higher performance (Linton et al., 2022).

Digital technologies are a powerful enabler for entrepreneurial firms, providing them with access to new tools, platforms, and data that can drive innovation and foster experimentation (Von Briel et al., 2018). Using technologies such as data analytics, artificial intelligence, and

cloud computing, entrepreneurial companies can uncover new insights, identify market opportunities, develop new solutions, and enhance their ability to create and implement innovative ideas, products, or services. This fosters a culture of innovation that can drive their competitive advantage and strengthen their entrepreneurial orientation (Amoako et al., 2021).

Moreover, digital technologies enable entrepreneurial companies to expand their market reach beyond traditional boundaries. Through digital platforms, e-commerce, and online marketing, companies can reach new markets, target different customer segments, and take advantage of global opportunities. This not only enhances their market expansion strategies, but also allows them to diversify their customer base and adapt to changing market dynamics. It fosters a forward-thinking mindset that embraces growth and exploration, and supports their entrepreneurial orientation (Cardinali & De Giovanni, 2022)

The speed and agility of entrepreneurial companies can also be greatly enhanced by digital technologies. Real-time information, rapid communications, and streamlined business processes facilitated by cloud computing, mobile technologies, and automation enable companies to quickly respond to market changes, customer demands, and competitive threats. This fosters a mindset of intelligence, adaptability, and response to opportunities and challenges, which is essential to entrepreneurial success (Corvello et al., 2021).

Customer engagement is another area in which digital technologies play a pivotal role in driving entrepreneurship. Social media, online communities, and digital marketing provide companies with opportunities for direct and real-time customer engagement, feedback, and co-creation of value (Lim & Rasul, 2022). This allows companies to better understand customer preferences, gather feedback, and tailor their offering to meet customer needs, leading to increased customer loyalty, repeat business, and positive word of mouth. A customer-centric approach, driven by digital technologies, supports an entrepreneurial mindset that prioritises customer satisfaction and stimulates business growth (Rizvanović et al., 2023).

Collaboration and networking are critical to entrepreneurial firms, and digital technologies provide powerful tools to facilitate these activities. Online collaboration tools, virtual teams, and digital communications allow companies to collaborate with partners, suppliers, and customers across geographic boundaries, fostering innovation, sharing resources, and exchanging knowledge (Corvello et al., 2021). Moreover, digital technologies enable companies to build and leverage networks and partnerships, providing access to resources, information, and opportunities that advance their entrepreneurial orientation. This fosters a

collaborative and connected mindset that thrives on partnerships and collaboration, leading to entrepreneurial success (Sá et al., 2022).

Finally, data-driven decision-making is essential for entrepreneurial companies to make informed and strategic choices, and digital technologies provide the tools for this process. Data analytics, business intelligence, and machine learning enable companies to analyse large amounts of data to gain insights, identify patterns, and make data-driven decisions. This enhances their ability to identify and exploit entrepreneurial opportunities, improve operations, and manage risk effectively. Moreover, data-driven decision making fosters a culture of experimentation, learning, and continuous improvement, which are critical elements for guiding entrepreneurship (Soltanifar & Smailhodžić, 2021).

### **3.4.2. Entrepreneurial orientation and organisational resilience**

Entrepreneurial orientation is a multidimensional concept that encompasses a company's willingness to innovate, take risks, and be proactive in pursuing new market opportunities (Lumpkin & Dess, 1996; Wiklund & Shepherd, 2005). It has been recognised in the literature on entrepreneurship as an essential component of firm performance and survival (Miller, 1983; Wiklund & Shepherd, 2005). Companies with an entrepreneurial orientation are better able to adapt to the uncertainties and challenges of the competitive environment (Lumpkin & Dess, 1996; Srinivasan & Venkatraman, 2018).

Empirical research has shown that an entrepreneurial orientation has a positive long-term effect on performance (Wiklund, 1999; Khedhaouria et al., 2020). From the perspective of resource advantage theory, entrepreneurial orientation can be viewed as an organisational resource that enables a business to stand out from competitors, generating wealth and economic dynamism during the competitive process (Hitt et al., 2001). Such businesses can recognise and seize new market opportunities and adapt to changing conditions, thriving even in volatile markets (Srinivasan & Venkatraman, 2018).

Organisational resilience, on the other hand, is the ability of a company to respond effectively, recover quickly, and regenerate successfully in the face of catastrophic events and disruptions (Jia et al., 2020). Organisational resilience, on the other hand, is the ability of a company to respond effectively, recover quickly, and regenerate successfully in the face of catastrophic events and disruptions (Jia et al., 2020). Also, they are better equipped to develop

new capabilities and respond to unexpected events on a continuous basis (Srinivasan & Venkatraman, 2018).

Entrepreneurial mentoring is a powerful tool for building organisational resilience by emphasising a proactive approach to environmental changes and disruptions. It promotes flexibility, adaptability, risk-taking and innovation, helping companies to anticipate challenges and respond to them more effectively. Proactivity enables companies to stay ahead of the competition and overcome uncertainties, which enhances their resilience. Venturing allows companies to take advantage of new opportunities, access new markets, develop new products or services, and foster a culture of experimentation and learning. Innovation enables companies to create new offerings, diversify their portfolios, and adapt to changing market conditions, thus reducing their exposure to disruption. Together, these dimensions of entrepreneurial guidance enhance organisational resilience and enable companies to emerge stronger from adverse situations.

Entrepreneurship is also associated with calculated risk-taking, which involves identifying potential risks and then mitigating or sharing those risks (Hacioglu et al., 2012). In summary, we hypothesise that entrepreneurial orientation positively affects organisational resilience.

EO promotes organisational resilience through two main dimensions. Firstly, it enhances a firm's strategic flexibility, allowing it to change direction quickly and adapt to new market conditions. Entrepreneurial firms tend to be more flexible in their approach to decision-making, and this adaptability enables them to respond effectively to changes in the market or industry, which contributes to their competitiveness and resilience in the face of disruptions or crises (Rauch et al., 2009; Covin et al., 2006; Al-Hakimi & Borade, 2020).

Secondly, EO also promotes resource leveraging, which refers to a firm's ability to effectively utilise its resources to adapt to changing circumstances. Entrepreneurial firms tend to be more resourceful in their approach to business operations, leveraging their existing resources and capabilities to create new opportunities or overcome challenges. (Zahra, 2021; Morris et al., 2002) This resourcefulness enables them to effectively navigate disruptions or crises, such as through strategic alliances, outsourcing, or diversification (Porter, 2000). This ability to effectively leverage resources contributes to the firm's resilience in the face of uncertainty or adversity (Pereira et al., 2019; Mao et al., 2023).

EO promotes organisational resilience through several key mechanisms. Firstly, EO enhances a firm's adaptive capacity, enabling it to adjust and respond to changes in the business environment, such as market conditions, technological advancements, and competitive pressures. This adaptability helps firms effectively weather uncertainties, disruptions, and crises, thus promoting resilience. Secondly, EO fosters innovation by encouraging a culture of experimentation, learning, and creativity. This innovation-driven approach helps firms stay competitive, identify new growth opportunities, and find alternative solutions during disruptions or crises, leading to faster recovery. Together, the adaptive capacity and innovation fostered by EO contribute to organisational resilience, enabling firms to thrive in the face of challenges.

### **3.4.3. The role of Digital technologies in fostering organisational resilience through Entrepreneurial orientation.**

Digital technologies have revolutionised the way organisations operate in the modern business landscape (Elia et al., 2020). By enabling companies to access real-time data and insights, communicate effectively with stakeholders, and develop more agile business processes, digital technologies have become essential tools for achieving organisational resilience (Goncalves et al., 2022). This paper discusses five major ways in which digital technologies can enhance organisational resilience by channelling entrepreneurship.

Digital leadership is a critical component of organisational resilience in the digital age. Digital leaders must be able to navigate complex and rapidly changing digital environments, anticipate and respond to digital disruptions, and create a culture of innovation and agility (Kane et al., 2019). Digital technologies enable leaders to access real-time data and insights, make informed decisions, and communicate effectively with stakeholders (Cortellazzo et al., 2019).

Innovation is another important factor in building organisational resilience (Mafabi et al., 2012). By leveraging digital technologies, companies can identify new opportunities, experiment with new ideas, and collaborate with external partners to create shared value. This ability to innovate allows companies to create new products, services, and business models that meet changing customer needs and preferences and stay ahead of the competition (Lee et al., 2012).

Customer focus is another key component of organisational resilience (Ozanne et al., 2022). By leveraging digital technologies, companies can collect and analyse customer data, providing valuable insights into customer behaviour, preferences, and vulnerabilities (Dwivedi et al., 2021). By developing more customer-centric business models, such as personalised marketing, targeted product development, and customer service automation, companies can enhance their ability to deliver customer value and differentiate themselves from competitors (Schuhs et al., 2020).

Collaboration is another important factor in building organisational resilience. Digital technologies enable companies to collaborate more effectively, regardless of geographic or organisational boundaries (Jia et al., 2020). By leveraging digital collaboration tools, such as video conferencing, cloud-based document sharing, and online project management, companies can enhance their ability to work with external partners, co-create value, and access new resources and capabilities (Schreieck et al., 2021; Muninger et al., 2019).

Finally, digital technologies can enhance resilient infrastructure by building and maintaining robust digital systems and networks that can withstand disruptions and cyberattacks (Argyroudis et al., 2022). By implementing advanced security measures, such as firewalls, intrusion detection systems, and encryption, and developing disaster recovery plans that can reduce the impact of disruptions, companies can enhance their ability to protect their assets and maintain continuity of operations in the face of challenges (Patel et al., 2010).

### **3.5. CONCLUSION**

In conclusion, The integration of digital tools enables firms to enhance their strategic flexibility by quickly adapting to new market conditions (Elia et al., 2020). The agility and adaptability inherent in EO allow firms to respond effectively to changes in the business environment, contributing to their competitiveness and resilience in the face of disruptions or crises (Jean et al., 2021). Additionally, digital technologies facilitate resource leveraging, empowering firms to effectively utilise their resources and capabilities to adapt to changing circumstances (Kane et al., 2019). Entrepreneurial firms' resourcefulness, coupled with digital tools, enables them to navigate disruptions by leveraging strategic alliances, outsourcing, or diversification (Rauch et al., 2009).

Digital technologies also promote resource leveraging by empowering firms to effectively utilise their existing resources and capabilities to navigate changing circumstances (Andre et

al., 2018). Through strategic alliances, outsourcing, and diversification, firms can overcome challenges and seize new opportunities. This resourcefulness, combined with the innovation-driven nature of EO, helps organisations identify alternative solutions, foster a culture of experimentation and learning, and stay competitive even in the face of uncertainty (Lee et al., 2012).

By enhancing adaptive capacity and fostering innovation, digital technologies empower organisations to build resilience. The ability to adjust and respond to environmental changes, coupled with the creativity to explore new growth avenues, enables firms to thrive in challenging times. Digital technologies act as enablers, providing the tools and infrastructure necessary to support EO and its role in fostering organisational resilience (Goncalves et al., 2022). Therefore, it is imperative for organisations to recognize the transformative potential of digital technologies and incorporate them strategically to enhance EO and promote resilience. Embracing digital innovation and leveraging technological advancements can strengthen a firm's ability to navigate disruptions, seize opportunities, and maintain a competitive edge in today's dynamic business landscape (Elia et al., 2020).

### **3.6. FUTURE DIRECTIONS AND LIMITATIONS**

Future research should consider conducting longitudinal studies to examine the long-term effects of digital technologies on entrepreneurial orientation and organisational resilience. This will provide a deeper understanding of the dynamic nature of these relationships and the changes that occur over time. Also, multilevel analysis. While the focus of this article was on the organisational level, future research could explore the role of digital technologies in enhancing entrepreneurship orientation and organisational resilience at different levels, such as the team or individual level. Understanding the mechanisms and interactions at various levels would provide a more comprehensive view of the impact of digital technologies.

In addition, future research could explore the mediating and moderating factors that influence the relationship between digital technologies, entrepreneurial direction, and organisational resilience. Factors such as organisational culture, leadership styles, and external environmental conditions can shape the outcomes of these relationships and require further investigation.

The mini-review states that the limited results available at present do not allow for a systematic meta-analysis. This limitation indicates that conclusions drawn in the review are



based on a smaller set of studies, which may not reflect the full scope of the relationship between digital technologies, entrepreneurial orientation, and organisational resilience. Generalizability The results discussed in the article may be limited in their generalizability due to the specific context from which they were derived. Future research should aim to replicate and validate these findings in different regulatory settings to ensure their applicability across diverse contexts. In addition, the article does not explicitly discuss the measurement tools used in the studies reviewed. It is essential to ensure the reliability and validity of measurement tools when examining complex constructs such as entrepreneurial orientation and organisational resilience. Future research should address measurement issues to enhance the robustness of the findings.

Moreover, the pace of technological change is constantly increasing, and the article acknowledges the need for continuous innovation. However, this rapid evolution of digital technologies may present challenges for organisations aiming to adapt and benefit from them effectively. Future research should consider the effects of technological acceleration and the challenges associated with organisational resilience and entrepreneurial orientation.

### 3.7. REFERENCES

- Al-Hakimi, M. A., & Borade, D. B. (2020). The impact of entrepreneurial orientation on the supply chain resilience. *Cogent Business & Management*, 7(1), 1847990. <https://doi.org/10.1080/23311975.2020.1847990>
- Amoako, G. K., Omari, P., Kumi, D. K., Agbemabiase, G. C., & Asamoah, G. K. (2021). Conceptual Framework—Artificial Intelligence and Better Entrepreneurial Decision-Making: The Influence of Customer Preference, Industry Benchmark, and Employee Involvement in an Emerging Market. *Journal of Risk and Financial Management*, 14(12), 604. <https://doi.org/10.3390/jrfm14120604>
- Andre, L., Michael, B., Daniel, R., & Christian, K. (2018). *Framework for the identification and demand-orientated classification of digital technologies*. <https://doi.org/10.1109/itmc.2018.8691135>
- Argyroudis, S., Mitoulis, S. A., Chatzi, E., Baker, J. W., Brilakis, I., Gkoumas, K., Vousdoukas, M., Hynes, W., Carluccio, S., Keou, O., Frangopol, D. M., & Linkov, I. (2022). Digital technologies can enhance climate resilience of critical infrastructure. *Climate Risk Management*, 35, 100387. <https://doi.org/10.1016/j.crm.2021.100387>

- Cardinali, P. G., & De Giovanni, P. (2022). Responsible digitalization through digital technologies and green practices. *Corporate Social Responsibility and Environmental Management*, 29(4), 984–995. <https://doi.org/10.1002/csr.2249>
- Cortellazzo, L., Bruni, E., & Zampieri, R. (2019). The Role of Leadership in a Digitalized World: A Review. *Frontiers in Psychology*, 10. <https://doi.org/10.3389/fpsyg.2019.01938>
- Corvello, V., De Carolis, M., Verteramo, S., & Steiber, A. (2021). The digital transformation of entrepreneurial work. *International Journal of Entrepreneurial Behaviour & Research*, 28(5), 1167–1183. <https://doi.org/10.1108/ijeb-01-2021-0067>
- Covin, J. G., Green, K. M., & Slevin, D. P. (2006). Strategic Process Effects on the Entrepreneurial Orientation–Sales Growth Rate Relationship. *Entrepreneurship Theory and Practice*, 30(1), 57–81. <https://doi.org/10.1111/j.1540-6520.2006.00110.x>
- Covin, J. G., & Slevin, D. P. (1989). Strategic management of small firms in hostile and benign environments. *Strategic Management Journal*, 10(1), 75–87. <https://doi.org/10.1002/smj.4250100107>
- Duchek, S. (2020). Organizational resilience: a capability-based conceptualization. *Business Research*, 13(1), 215–246. <https://doi.org/10.1007/s40685-019-0085-7>
- Dwivedi, Y. K., Ismagilova, E., Hughes, D. H., Carlson, J., Filieri, R., Jacobson, J., Jain, V., Karjaluoto, H., Kefi, H., Krishen, A. S., Kumar, V., Rahman, M. M., Raman, R., Rauschnabel, P. A., Rowley, J., Salo, J., Tran, G. A., & Wang, Y. (2021). Setting the future of digital and social media marketing research: Perspectives and research propositions. *International Journal of Information Management*, 59, 102168. <https://doi.org/10.1016/j.ijinfomgt.2020.102168>
- Elia, G., Margherita, A., & Passiante, G. (2020). Digital entrepreneurship ecosystem: How digital technologies and collective intelligence are reshaping the entrepreneurial process. *Technological Forecasting and Social Change*, 150, 119791. <https://doi.org/10.1016/j.techfore.2019.119791>
- Goncalves, D., Bergquist, M., Alänge, S., & Bunk, R. (2022). How Digital Tools Align with Organizational Agility and Strengthen Digital Innovation in Automotive Startups. *Procedia Computer Science*, 196, 107–116. <https://doi.org/10.1016/j.procs.2021.11.079>
- Hacioglu, G., Eren, S. S., Eren, M. S., & Çelikkan, H. (2012). The Effect of Entrepreneurial Marketing on Firms' Innovative Performance in Turkish SMEs. *Procedia - Social and Behavioral Sciences*, 58, 871–878. <https://doi.org/10.1016/j.sbspro.2012.09.1065>

- Hervé, A., Schmitt, C., & Baldegger, R. (2020). Digitalization, Entrepreneurial Orientation & Internationalization of Micro-, Small-, and Medium-Sized Enterprises. *Technology Innovation Management Review*, 10(4), 5–17. <https://doi.org/10.22215/timreview/1343>
- Hitt, M. A., Ireland, R. D., Camp, S. M., & Sexton, D. L. (2001). Strategic entrepreneurship: entrepreneurial strategies for wealth creation. *Strategic Management Journal*, 22(6–7), 479–491. <https://doi.org/10.1002/smj.196>
- Jean, R. “., Kim, D., Zhou, K. Z., & Cavusgil, S. T. (2021). E-platform use and exporting in the context of Alibaba: A signaling theory perspective. *Journal of International Business Studies*, 52(8), 1501–1528. <https://doi.org/10.1057/s41267-020-00396-w>
- Jia, X., Chowdhury, M., Prayag, G., & Chowdhury, M. M. H. (2020). The role of social capital on proactive and reactive resilience of organizations post-disaster. *The Role of Social Capital on Proactive and Reactive Resilience of Organizations Post-disaster*, 48, 101614. <https://doi.org/10.1016/j.ijdr.2020.101614>
- Kane, G. C., Phillips, A. N., Copulsky, J. R., & Andrus, G. R. (2019). How digital leadership is(n't) different. *MIT Sloan Management Review*, 60(3), 34–39. <https://www.scholars.northwestern.edu/en/publications/how-digital-leadership-isnt-different>
- Khedhaouria, A., Nakara, W. A., Gharbi, S., & Bahri, C. (2020). The Relationship between Organizational Culture and Small-firm Performance: Entrepreneurial Orientation as Mediator. *European Management Review*, 17(2), 515–528. <https://doi.org/10.1111/emre.12383>
- Lee, S. Y., Olson, D. L., & Trimi, S. (2012). Co-innovation: convergenomics, collaboration, and co-creation for organizational values. *Management Decision*, 50(5), 817–831. <https://doi.org/10.1108/00251741211227528>
- Lim, W. M., & Rasul, T. (2022). Customer engagement and social media: Revisiting the past to inform the future. *Journal of Business Research*, 148, 325–342. <https://doi.org/10.1016/j.jbusres.2022.04.068>
- Linton, G. (2019). Innovativeness, risk-taking, and proactiveness in startups: a case study and conceptual development. *Journal of Global Entrepreneurship Research*, 9(1). <https://doi.org/10.1186/s40497-019-0147-5>
- Lumpkin, G. T., & Dess, G. G. (1996). Clarifying the Entrepreneurial Orientation Construct and Linking It to Performance. *Academy of Management Review*, 21(1), 135. <https://doi.org/10.2307/258632>

- Mafabi, S., Munene, J. C., & Ntayi, J. M. (2012). Knowledge management and organisational resilience. *Journal of Strategy and Management*, 5(1), 57–80.  
<https://doi.org/10.1108/17554251211200455>
- Mao, Y., Li, P., & Li, Y. (2023). The relationship between slack resources and organizational resilience: The moderating role of dual learning. *Heliyon*, 9(3), e14044.  
<https://doi.org/10.1016/j.heliyon.2023.e14044>
- Morris, M. A., Schindehutte, M., & LaForge, R. W. (2002). Entrepreneurial Marketing: A Construct for Integrating Emerging Entrepreneurship and Marketing Perspectives. *The Journal of Marketing Theory and Practice*, 10(4), 1–19.  
<https://doi.org/10.1080/10696679.2002.11501922>
- Muninger, M., Hammedi, W., & Mahr, D. (2019). The value of social media for innovation: A capability perspective. *Journal of Business Research*, 95, 116–127.  
<https://doi.org/10.1016/j.jbusres.2018.10.012>
- Nambisan, S. (2017). Digital entrepreneurship: Toward a digital technology perspective of entrepreneurship. *Entrepreneurship Theory and Practice*, 41(6), 1029–1055.  
<https://doi.org/10.1111/etap.12254>
- Ozanne, L. K., Chowdhury, M., Prayag, G., & Mollenkopf, D. A. (2022). SMEs navigating COVID-19: The influence of social capital and dynamic capabilities on organizational resilience. *Industrial Marketing Management*, 104, 116–135.  
<https://doi.org/10.1016/j.indmarman.2022.04.009>
- Patel, A., Qassim, Q. S., & Wills, C. (2010). A survey of intrusion detection and prevention systems. *Information Management & Computer Security*, 18(4), 277–290.  
<https://doi.org/10.1108/09685221011079199>
- Pathak, M. D., Kar, B., Panigrahi, R. R., & Shrivastava, A. K. (2023). Role of entrepreneurial resilience in SMEs to promote marketing and entrepreneurship amid Covid19 challenges. *Journal of Research in Marketing and Entrepreneurship*.  
<https://doi.org/10.1108/jrme-04-2022-0050>
- Pereira, V., Munjal, S., & Ishizaka, A. (2019). Outsourcing and offshoring decision making and its implications for businesses - A synthesis of research pursuing five pertinent questions. *Journal of Business Research*, 103, 348–355.  
<https://doi.org/10.1016/j.jbusres.2019.07.009>
- Porter, M. E. (2000). Location, Competition, and Economic Development: Local Clusters in a Global Economy. *Economic Development Quarterly*, 14(1), 15–34.  
<https://doi.org/10.1177/089124240001400105>

- Rauch, A., Wiklund, J., Lumpkin, G. T., & Frese, M. (2009). Entrepreneurial Orientation and Business Performance: An Assessment of past Research and Suggestions for the Future. *Entrepreneurship Theory and Practice*, 33(3), 761–787.  
<https://doi.org/10.1111/j.1540-6520.2009.00308.x>
- Rigtering, J. C., & Behrens, M. A. (2021). The Effect of Corporate — Start-Up Collaborations on Corporate Entrepreneurship. *Review of Managerial Science*, 15(8), 2427–2454.  
<https://doi.org/10.1007/s11846-021-00443-2>
- Rizvanović, B., Zutshi, A., Grilo, A., & Nodehi, T. (2023). Linking the potentials of extended digital marketing impact and start-up growth: Developing a macro-dynamic framework of start-up growth drivers supported by digital marketing. *Technological Forecasting and Social Change*, 186, 122128. <https://doi.org/10.1016/j.techfore.2022.122128>
- Sá, E., Farhangmehr, M., Pinho, J. L. S., & Dibb, S. (2022). Marketing decisions and implementation process for entrepreneurial and managerial practices: a critical incident technique approach. *Journal of Research in Marketing and Entrepreneurship*, 24(2), 221–241. <https://doi.org/10.1108/jrme-04-2021-0052>
- Schreieck, M., Wiesche, M., & Krcmar, H. (2021). Capabilities for value co-creation and value capture in emergent platform ecosystems: A longitudinal case study of SAP's cloud platform. *Journal of Information Technology*, 36(4), 365–390.  
<https://doi.org/10.1177/02683962211023780>
- Schuhs, G., Gützlaff, A., Cremer, S., Lammersmann, J., & Liu, Y. W. (2020). *Business Model and Organization – Interdependencies for Customer-Centric Continuous Innovation in Subscription Business*. <https://doi.org/10.1109/ieem45057.2020.9309897>
- Shen, Z. M., & Sun, Y. (2021). Strengthening supply chain resilience during COVID - 19: A case study of JD .com. *Journal of Operations Management*.  
<https://doi.org/10.1002/joom.1161>
- Si, S., Hall, J., Suddaby, R., Ahlstrom, D., & Wei, J. (2022). Technology, entrepreneurship, innovation and social change in digital economics. *Technovation*, 119, 102484.  
<https://doi.org/10.1016/j.technovation.2022.102484>
- Sjödin, D. R., Parida, V., Palmié, M., & Wincent, J. (2021). How AI capabilities enable business model innovation: Scaling AI through co-evolutionary processes and feedback loops. *Journal of Business Research*, 134, 574–587.  
<https://doi.org/10.1016/j.jbusres.2021.05.009>
- Soltanifar, M., & Smailhodžić, E. (2021). Developing a Digital Entrepreneurial Mindset for Data-Driven, Cloud-Enabled, and Platform-Centric Business Activities: Practical

- Implications and the Impact on Society. In *Future of Business and Finance* (3–21). Springer International Publishing. [https://doi.org/10.1007/978-3-030-53914-6\\_1](https://doi.org/10.1007/978-3-030-53914-6_1)
- Srinivasan, A., & Venkatraman, N. (2018). Entrepreneurship in digital platforms: A network-centric view. *Strategic Entrepreneurship Journal*, 12(1), 54–71. <https://doi.org/10.1002/sej.1272>
- Teece, D. J. (2017). Dynamic Capabilities and (Digital) Platform Lifecycles. In *Advances in strategic management* (211–225). <https://doi.org/10.1108/s0742-332220170000037008>
- Volberda, H. W., Khanagha, S., Baden-Fuller, C., Mihalache, O. R., & Birkinshaw, J. (2021). Strategizing in a digital world: Overcoming cognitive barriers, reconfiguring routines and introducing new organizational forms. *Long Range Planning*, 54(5), 102110. <https://doi.org/10.1016/j.lrp.2021.102110>
- Von Briel, F., Davidsson, P., & Recker, J. C. (2018). Digital Technologies as External Enablers of New Venture Creation in the IT Hardware Sector. *Entrepreneurship Theory and Practice*, 42(1), 47–69. <https://doi.org/10.1177/1042258717732779>
- Zahra, S. A. (1993). Environment, corporate entrepreneurship, and financial performance: A taxonomic approach. *Journal of Business Venturing*, 8(4), 319–340. [https://doi.org/10.1016/0883-9026\(93\)90003-n](https://doi.org/10.1016/0883-9026(93)90003-n)
- Zahra, S. A. (2021). The Resource-Based View, Resourcefulness, and Resource Management in Startup Firms: A Proposed Research Agenda. *Journal of Management*, 47(7), 1841–1860. <https://doi.org/10.1177/01492063211018505>
- Zahra, S. A., Liu, W., & Si, S. (2022). How digital technology promotes entrepreneurship in ecosystems. *Technovation*, 119, 102457. <https://doi.org/10.1016/j.technovation.2022.102457>

# *Capítulo 4*

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# 4. ENHANCING SOCIAL RESPONSIBILITY AND RESILIENCE THROUGH ENTREPRENEURSHIP AND DIGITAL ENVIRONMENT

## 4.1. ABSTRACT

This study explores how corporate social responsibility, digital technologies, and entrepreneurship synergistically enhance organisational resilience in small and medium enterprises. Investigating Andalusia's business landscape, we employ dynamic capabilities' theory to unveil the mechanics underlying corporate social responsibility, digital technologies, and organisational resilience. We empirically validate the significance of this synergy via a survey of 259 SMEs. We discuss implications for theory and practice, illuminating small and medium enterprises' strategic use of digital tech to amplify corporate social responsibility and resilience against disruptions. Practical guidelines are outlined for small and medium enterprises navigating dynamic business contexts. Policymakers, business leaders, and entrepreneurs can leverage insights to foster sustainable and innovative practices. Embracing corporate social responsibility and entrepreneurship cultivates resilience, enabling small medium enterprises to thrive amidst challenges and maintain a competitive edge. Recognizing and harnessing corporate social responsibilities, digital tech, and entrepreneurship synergy empowers small medium enterprises to forge resilient business environments for lasting success.

**Keywords:** Corporate social responsibility, Organisational resilience, Corporate entrepreneurship, Dynamic capabilities theory.

## 4.2. INTRODUCTION

In the contemporary dynamic and rapidly evolving landscape of contemporary business, small and medium enterprises (SMEs) in Spain find themselves grappling with an array of complex hurdles. These encompass the mounting expectations of stakeholders, the rapid pace of technological advancements, and an increasing recognition of the broader societal and environmental reverberations that arise from their activities (Pfajfar et al., 2022). This underscores the imperative for SMEs, which make up a significant 99% of companies in the province of Andalusia, to prioritise innovation, digital transformation, and entrepreneurship, alongside their unwavering commitment to social responsibility (Marchese et al., 2011). Such



measures are pivotal for ensuring their resilience and sustainability amidst these formidable challenges.

Amid this intricate backdrop, the concept of organisational resilience (OR) has emerged as a pivotal determinant within the current business milieu, particularly due to heightened uncertainties, market volatility, and intricacies. The capacity of organisations to swiftly and effectively adapt to shifting conditions, coupled with their ability to anticipate and brace for potential disruptions, is now of paramount significance (Duchek, 2020). Establishing this agility necessitates proactive risk management strategies, encompassing the formulation of contingency plans and the adeptness to promptly and resolutely respond to crises (Yuan et al., 2022).

However, despite the recognition of the significance of organisational resilience, many companies tend to adopt a reactive rather than proactive stance in bolstering it (Jia et al., 2020). This prevailing approach engenders a noteworthy dissonance between the perceived importance of resilience and the actual level of preparedness exhibited by companies in the face of potential disruptions (Kim, 2021). Nonetheless, certain companies are taking affirmative steps towards augmenting their resilience: they are incorporating resilience into their overarching business strategies, devising robust emergency response protocols, and making investments in technological solutions to enhance operational efficiency and agility (Roffia & Dabić, 2023).

Yet, a comprehensive integration of resilience into organisational strategies and operations remains an ongoing challenge, highlighting the need to bridge the chasm between perceived significance and tangible readiness (Do et al., 2021). A cornerstone of organisational resilience hinges on cultivating robust relationships with stakeholders—ranging from customers and employees to suppliers and partners. Companies that prioritise active engagement and transparent communication with stakeholders are inherently better positioned to navigate crises, foster trust, and cultivate loyalty (Xiaotian et al., 2021; Ho et al., 2022).

The concept of Corporate Social Responsibility (CSR) has emerged as a strategic imperative, compelling organisations to intricately weave ethical, social, and environmental considerations into their business practices (Pfajfar et al., 2022). At its essence, CSR embodies a company's commitment to discerning the societal and environmental repercussions of its business activities. This intricate and multidimensional notion transcends conventional business paradigms, warranting a holistic approach (Agudo-Valiente et al., 2015). CSR entails not solely

profit maximisation, but equally underscores the creation of shared value and contributions to sustainable development (Matten & Moon, 2008).

Moreover, the burgeoning recognition of sustainability and social responsibility as integral components of organisational resilience has gained momentum. Organisations can fortify their resilience by fortifying stakeholder relationships, enhancing brand reputation, and fostering a sense of purpose and shared values across the organisation (DiBella et al., 2022; George & Schillebeeckx, 2022). This holistic convergence of CSR and resilience marks a pivotal juncture for Spanish companies as they navigate the intricate tapestry of contemporary business challenges.

Furthermore, it is imperative to recognize that Corporate Social Responsibility (CSR) initiatives, encompassing endeavours such as fostering employee well-being and championing environmental sustainability, wield the potential to not only bolster a company's reputation but also garner steadfast stakeholder support and augment resilience (Low & Bu, 2021).

In parallel, the concept of Corporate Entrepreneurship (CE) signifies an organisation's propensity to embrace risk and drive innovation. This strategic inclination has been correlated with heightened organisational resilience, attributed to its influence on an enterprise's adaptive and strategic decision-making capabilities (Kim et al., 2021). Within the scope of this study, we direct our focus towards four facets of CE: the pursuit of new business ventures, innovation, self-renewal, and proactive approaches. These dimensions have been previously identified in the literature (Nambisan et al., 2019; Zahra, 1993; Knight, 1997; Martín Rojas et al., 2017) and are widely employed to scrutinise firms' entrepreneurial endeavours.

Amidst the context of the commercialization of disruptive technologies, small and medium-sized enterprise (SME) entrepreneurship in Spain confronts a web of interconnected challenges (Cennamo and Santaló, 2019). The advent of Industry 4.0, coupled with the unforeseen global upheaval caused by the COVID-19 pandemic, has ushered in a transformative business environment. This unprecedented scenario has ignited contemplation regarding the continued pivotal role that SME owners can play in this burgeoning business landscape (Liguori and Winkler, 2020). The array of challenges faced by entrepreneurs in this realm is multifaceted.

Similarly, the process of Digital Transformation (DT) holds the potential to heighten resilience by infusing innovation and responsiveness. Through the integration of novel

technologies such as digital tools and data analytics, companies can glean insights into consumer behaviour and market dynamics, thereby facilitating swift adaptations to shifting circumstances (Do et al., 2021). Within this context, the role of technology management emerges as a decisive factor in fostering resilience.

The assimilation of groundbreaking technologies within the realm of SME entrepreneurship necessitates a synergy of managerial, financial, and technological competencies (Giotopoulos et al., 2017; Chatterjee, 2020). Small and medium-sized enterprises are compelled to recalibrate and tailor their existing skill sets and expertise within the dynamic contours of a rapidly evolving landscape. Rapid assimilation and utilisation of novel technology, however, have been found to impede SME entrepreneurs, dampening their inclination to embark on technological initiatives (Kirchhoff and Walsh, 2000, 2008; Ayyagari et al., 2011; Chatterjee et al., 2021). The swift proliferation of digital platform ecosystems, within the ambit of SME utilisation, still lags behind (Cennamo and Santaló, 2019; Chatterjee et al., 2020; Kahle et al., 2020; Wang et al., 2020).

Yet, irrespective of the challenges at hand (Giotopoulos et al., 2017), SMEs have reaped the benefits arising from the emergence of a plethora of digital technologies, encompassing the Internet of Things (IoT), blockchain, artificial intelligence (AI), social media, and additive manufacturing processes, among others. Furthermore, digital platforms serve as pivotal technological conduits, facilitating companies to curate, standardise, and disseminate data on a sizable scale (Yu et al., 2010; Kar et al., 2019). Through these digital platforms, SME entrepreneurs have ventured into domains that were traditionally dominated by larger enterprises, thereby competing asymmetrically (Jin and Hurd, 2018; Chatterjee, 2019; Piccolo et al., 2021). The integration of digital technologies has empowered SME entrepreneurs to forge direct connections with suppliers and buyers, attract suitable investors via crowdsourcing and crowdfunding, engage more intimately with potential clientele, and harness data more effectively (Courtney et al., 2017; Elia et al., 2020).

Nonetheless, critical gaps persist in comprehending the intricate interplay between digital technologies, entrepreneurship, and their role in amplifying organisational resilience through the prism of social responsibility. While digital technologies have demonstrated the potential to augment organisational resilience and adaptive capabilities, further exploration is warranted to unravel how they intricately underpin business continuity and resilience. Recent investigations have begun to unveil how innovation in digital technologies and processes could contribute to

bolstering organisational resilience (Feiyang et al., 2022; Ciasullo et al., 2022). Moreover, certain studies have delved into the nexus between specific digital technologies, corporate entrepreneurship, and organisational resilience (Martín Rojas et al., 2023). However, the intricate mechanisms through which these dynamics collectively shape and fortify resilience remain a realm ripe for deeper inquiry and analysis.

However, a conspicuous void exists within existing literature, wherein the interplay between digital technologies and corporate entrepreneurship and their collective influence on CSR remains largely unexplored. Equally uncharted is the reciprocal relationship where CSR, in turn, impacts organisational resilience. Addressing this significant gap, the present study endeavours to illuminate this intricate nexus, thereby furnishing invaluable insights for enterprises striving to fortify their resilience in a dynamic landscape.

Centred within the province of Andalusia, Spain, the study hinged upon a meticulous examination encompassing 259 small and medium-sized enterprises. Notably, the findings gleaned from this survey unveil a twofold impact of digital technologies. Beyond merely facilitating CSR, digital technologies emerge as catalysts that elevate the contours of corporate entrepreneurship. Furthermore, the cultivation of corporate entrepreneurship not only engenders the growth of CSR but also begets an augmentation in corporate social responsibility, in turn fostering heightened organisational resilience. These empirical outcomes collectively underscore the premise that nurturing digital technologies and fostering corporate entrepreneurship can synergistically ameliorate corporate social responsibility, thereby culminating in an elevated organisational resilience. Such insights resoundingly emphasise the indispensability of a holistic framework when sculpting organisational resilience.

In pursuit of these scholarly objectives, this paper's structure unfolds as follows: In Section 2, an in-depth scrutiny is undertaken, delving into the theoretical underpinnings that underscore our exploration of dynamic abilities. Additionally, a comprehensive review of pertinent literature and the hypotheses in question is meticulously presented. Transitioning to Section 3, an intricate elucidation of our data collection protocols ensues. Section 4 serves as the locus of a meticulous analysis, wherein experimental results are scrutinised and subsequently discussed in a cogent manner. Finally, Section 5 draws the curtain, delineating and evaluating the limitations that have punctuated our research journey, concurrently proffering insightful vistas for future exploratory endeavours.

### **4.3. THEORETICAL BACKGROUND AND HYPOTHESES**

#### **4.3.1. Dynamic capability theory**

The discourse concerning the role of Corporate Social Responsibility within the interplay of Dynamic Capability Theory (DCT), Digital Technologies, Corporate Entrepreneurship, and Organisational Resilience could be further fortified.

Dynamic Capability Theory (DCT) emerges as a prominent strategic management methodology, explaining the mechanisms by which organisations attain and uphold competitive advantage. Developed as an extension of the static Resource-Based View (RBV), DCT addresses the deficiency within RBV in comprehending how entities amalgamate resources and capabilities within a dynamic context (Kraaijenbrink et al., 2010; Winter, 2003; Pavlou & Sawy, 2011; Helfat & Peteraf, 2009).

Central to DCT is the appreciation of the dynamic essence characterising organisational capabilities and resources (Teece et al., 1997). This pertains to an enterprise's competence to "integrate, build, and reshape internal and external competencies to cope with swiftly shifting environments" (Teece et al., 1997). The theory accentuates the significance of organisational resilience and adaptability within an ever-changing milieu. DCT asserts that the ability to reconfigure resources and capabilities in response to environmental shifts is pivotal for acquiring and sustaining competitive advantage. Specifically, DCT advocates for the development of dynamic capabilities, enabling entities to discern, acquire, and transform resources and capabilities in consonance with evolving market dynamics (Teece, 2014; Ambrosini & Bowman, 2009).

Unlike the core set of valuable, rare, unique, and irreplaceable resources underscored by RBV, dynamic capabilities transcend these fundamentals. DCT, while leveraging the essence of RBV's core resources, delves into a firm's perpetual adaptability and innovation. This empowers organisations to tailor strategies and resources to perpetuate their competitive edge (Wade & Hulland, 2004).

These frameworks have indelibly enriched the landscape of strategic management literature, furnishing a deeper comprehension of the pathways by which organisations attain and sustain competitive ascendancy. By accentuating the gravity of organisational resources, capabilities, and resilience, these paradigms yield invaluable insights for both practitioners and

researchers, enhancing organisational efficacy within a swiftly evolving business milieu (Teecel 2014). Within the ambit of this study, we employ the tenets of dynamic capabilities to elucidate the symbiotic enhancements to organisational resilience engendered by the amalgamation of digital technologies and corporate entrepreneurship, facilitated through the prism of corporate social responsibility. Advanced digital technologies and platforms assume a pivotal role in bolstering sustainability and risk mitigation, fostering an ethical business standing, nurturing an innovative ethos, and facilitating adaptability and collaborative ventures with diverse stakeholders, thereby engendering value creation.

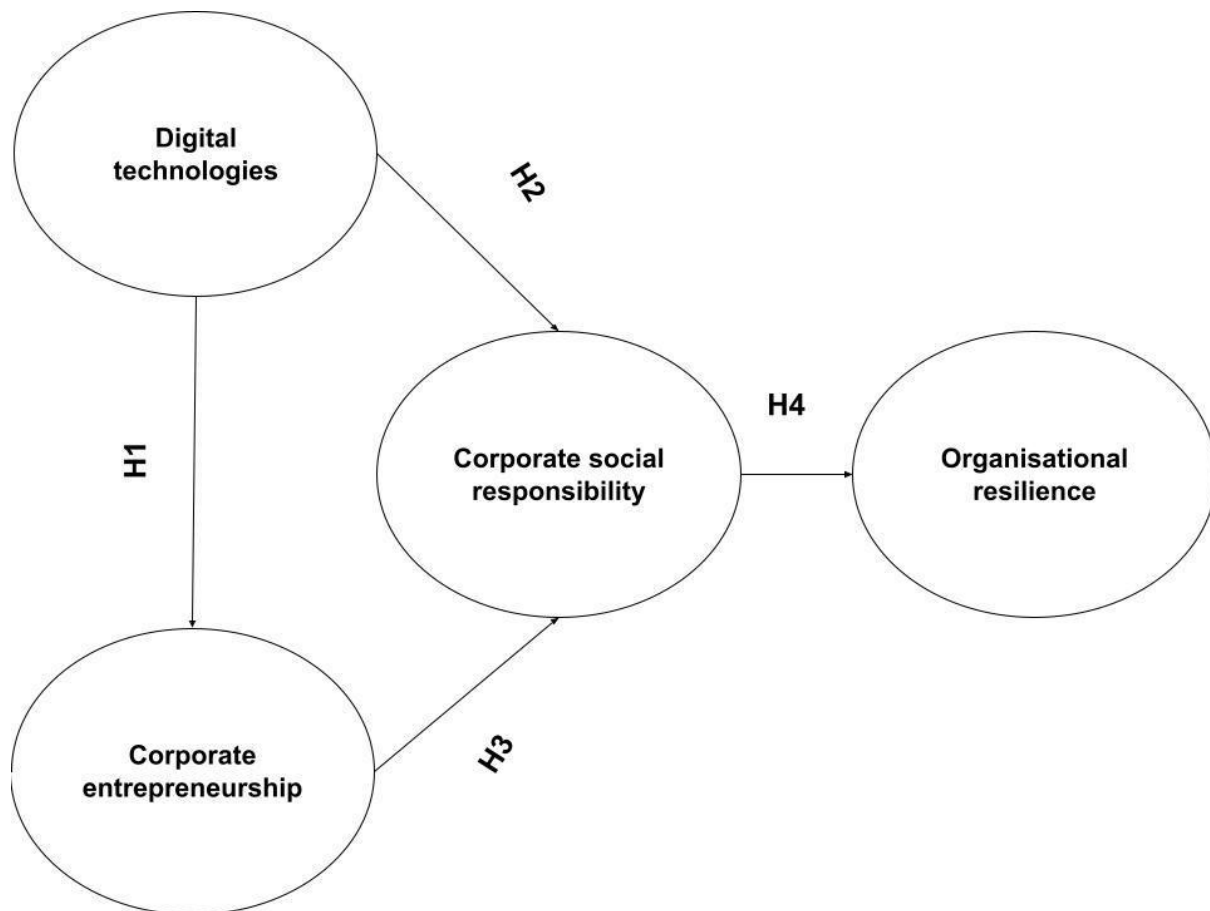
Additionally, digital technologies act as a catalyst for entrepreneurship, proffering novel avenues for creativity and collaborative pursuits. Online platforms offer avenues for investment in social and environmental impact, crowdfunding, and social innovation (Holzmann & Gregori, 2023; Si et al., 2022).

In this vein, the leveraging of digital resources and capabilities, coupled with an unwavering commitment to resilience and adaptability, empowers organisations to navigate the vicissitudes of a rapidly evolving business landscape. By adopting an entrepreneurial mindset towards CSR and harnessing digital technology to foster shared value, enterprises can augur an enriched reputation, amplified competitiveness, and enduring sustainability (Holzmann & Gregori, 2023).

Nevertheless, it becomes evident that the positive impact of corporate entrepreneurship on organisational resilience is intrinsically intertwined with the multi-dimensional spectrum of social responsibility – spanning economic, environmental, and social dimensions. This symbiosis is further contingent on internal and external factors. Moreover, in an expanded trajectory, our research model introduces digital technologies to elucidate how the integration of information and communication technology kindles the advancement of corporate social responsibility. This is accomplished through the enhancement of employee development and motivation and the alleviation of duplicative efforts in specific tasks.

In essence, the incorporation of digital technology delineates a mutually beneficial paradigm that engenders synergy between businesses and society. We encapsulate the aforementioned insights within our conceptual model, as illustrated in Figure 1.

FIGURE 1 Conceptual framework and hypotheses



## 4.4. HYPOTHESIS

### 4.4.1. Digital technologies and corporate entrepreneurship:

The pivotal role of digital technology in augmenting Corporate Entrepreneurship (CE) is widely acknowledged, harnessing diverse resources and tools to amplify entrepreneurial endeavours in multifaceted dimensions. According to Bharadwaj et al. (2013), digital technology acts as an enabler, aiding entrepreneurs in diverse domains – from identifying opportunities and developing novel products or services to expanding market reach and orchestrating seamless business operations. These digital technologies encompass a spectrum of elements, including social media, big data, mobile solution technologies, cloud computing, artificial intelligence (AI), the Internet of Things (IoT), and blockchain (Berman, 2012; Si et al., 2022; Nambisan, 2017; Martín-Rojas et al., 2020).

However, it is essential to recognize that the integration of digital technologies, despite their potential, may not always result in uniformly positive outcomes. While digital technologies offer avenues for innovation and connectivity, they can also introduce complexities and resource burdens. Excessive reliance on digital platforms can inadvertently

lead to information overload or breakdowns in communication, potentially impeding the agility and adaptability of entrepreneurs. Additionally, not all ventures can seamlessly incorporate digital technologies into their operations due to limitations in resources, regulatory obstacles, or industry-specific challenges (Engås et al., 2023).

Embedded within this tapestry is the profound significance of innovative processes, strategic resilience, and a penchant for risk-taking in the pursuit of entrepreneurial triumph. Furthermore, decision-making processes assume an indispensable role in enabling firms to discern and harness lucrative opportunities. This perspective elucidates that CE transcends being a fixed ensemble of attitudes or behaviours; instead, it embodies an ongoing journey of strategic adaptation and experimental ventures (Rauch et al., 2018).

In this trajectory and considering the perspective of dynamic capabilities theory digital technologies emerge as potent agents, substantially elevating the contours of corporate entrepreneurship. These technologies empower companies to unravel nascent market prospects, conceive innovative offerings, and forge robust connections with stakeholders, encompassing customers and suppliers (Singh et al., 2021; Tess, 2018). Through strategic investment in digital technology infrastructure and the cultivation of dynamic capabilities, enterprises stand poised to forge a sustainable competitive advantage, thereby amplifying their corporate entrepreneurship.

To illustrate, the utilisation of social media and other digital platforms empowers entrepreneurs to foster connections with potential customers, collaborators, and suppliers, facilitating invaluable feedback acquisition concerning their products or services – a conduit for unearthing fresh market opportunities (Miocevic & Morgan, 2018; Martín-Rojas et al., 2023).

Moreover, digital technology facilitates access to insights pertaining to competitors' offerings, pricing strategies, and service provision, thus affording entrepreneurs a compass to steer their competitive strategies and secure an edge (Liu & Yang, 2021). Additionally, the potency of big data analytics is harnessed to discern patterns and trends in consumer behaviour and market demand, charting a trajectory for informed innovation strategies and refined product development processes (Wang & Wang, 2020).

Digital technology, by bestowing entrepreneurs with heightened resilience and agility within their operational realms, plays a pivotal role. For instance, cloud computing and mobile technologies usher in a realm where entrepreneurs can seamlessly operate remotely, accessing



critical business data and applications from any location, thereby amplifying operational efficiency and efficacy (Nandi et al., 2016).

Likewise, digital technology extends a conduit for entrepreneurs to expand their customer base, harnessing the potential of e-commerce platforms to achieve broader market outreach, thus augmenting sales revenue and market penetration (Shemi & Procter, 2018). However, this avenue may not be equally viable for all industries, and competition in the online marketplace can be fierce, making it challenging for every entrepreneur to secure a significant foothold.

This palpable fusion of digital technology and entrepreneurship assumes an indispensable mantle for entrepreneurs seeking to enrich their orientation and chart a trajectory toward entrepreneurial success. However, it is important to acknowledge that the intersection of digital technologies and entrepreneurship is not a panacea, and its impact can be shaped by a plethora of contextual and situational factors.

Additionally, digital technologies emerge as catalysts for fostering the risk-taking demeanour of entrepreneurs by extending access to novel sources of information and resources. Notably, Zhang et al. (2022) underscore the role of online crowdfunding platforms, serving as avenues for capital generation for projects while simultaneously affording the capacity to gauge market demand for products or services.

Furthermore, digital technology stands as a wellspring for nurturing proactive entrepreneurial initiatives, equipping entrepreneurs with the essential tools and resources to seamlessly orchestrate business operations. For instance, the integration of cloud-based accounting software streamlines financial management processes, empowering entrepreneurs to make informed decisions pertaining to business operations (Ross & Blumenstein, 2015).

Collectively, the body of literature outlined above firmly affirms that the symbiotic union between digital technologies and entrepreneurship unfurls avenues of transformative potential, charting a trajectory towards enhanced organisational orientation and attaining entrepreneurial triumph. However, it's imperative to recognize that the impact of digital technologies on entrepreneurship can be multifaceted, contingent on an intricate interplay of myriad contextual variables. All the literature above leads us to affirm that:

*H1: Digital technologies have a positive impact on corporate entrepreneurship.*

#### **4.4.2. Digital technology and corporate social responsibility:**

The concept of corporate social responsibility has become increasingly important in today's business world. At its core, CSR refers to a company's obligation to consider the impact of its actions on society and the environment. CSR is measured by the triple bottom line (TBL), which includes economic, environmental and social performance. The concept of TBL was first introduced by John Elkington (1997). Since then, TBL has been widely adopted as a framework for sustainability reporting and management. In recent years, there has been increasing recognition of the importance of incorporating social and environmental considerations into business decisions. It has been found that there is a lack of consistency in how TBL is defined and applied, but there is general agreement on the importance of considering social and environmental influences in addition to economic ones.

Recent research has highlighted the importance of collaboration and partnerships in addressing social and environmental challenges. Increasingly, companies are collaborating with governments, Non-governmental organisations (NGOs), and other stakeholders to achieve common goals and create collective impact (Grayson & Hodges, 2017). This requires a shift from the traditional transactional approach to corporate social responsibility to a more collaborative and systematic approach.

Dynamic capabilities theory provides a framework for understanding how digital technologies such as social media, websites, blogs, and blockchain help improve many aspects of corporate social responsibility. Social media can be an effective tool for small and medium-sized enterprises to communicate their CSR initiatives to their stakeholders. Cardinali and De Giovanni (2022) argue that digital technologies can help companies enhance their social responsibility by improving their ability to collect and analyse data, enhance stakeholder engagement, and promote sustainability.

Digital technologies offer the ability to further CSR goals, but companies need to engage in responsible digitalization by identifying and implementing digital technologies that align with TBL and CSR goals. For example, social media can help companies reach a wider audience and engage with stakeholders more effectively, which can enhance CSR efforts (Troise & Camilleri, 2021).

Also, digital technologies such as artificial intelligence and the Internet of Things can reduce resource consumption and enhance social responsibility (Von Struensee, 2021).

Additionally, it can also help retailers communicate their CSR efforts to consumers and increase their awareness of sustainable practices (Bai et al., 2021). In addition, blockchain technology is used to share data about their supply chain operations in a transparent and secure manner, which can help improve accountability and reduce the risk of unethical practices (Saber et al., 2019; Upadhyay et al., 2021).

Moreover, digital technologies such as data analytics and sensors can help companies identify opportunities to improve resource efficiency and reduce waste. Where digital transformation enables companies to achieve their sustainability goals by enabling them to monitor and improve the use of their resources (Kunkel & Matthes, 2020).

SMEs can take advantage of digital technologies to achieve their CSR goals and create more sustainable and socially responsible business practices. First, digital technologies can support the development of sensing capabilities by enabling companies to collect and analyse data related to CSR issues (Schilke et al., 2018). For example, companies can use social media monitoring tools to track customer sentiment about CSR initiatives or use data analytics to assess the environmental impact of their operations. This data can inform companies' decisions about their CSR strategies and help them identify areas where they can improve their performance. Second, DT can facilitate the development of capture capabilities by enabling companies to collaborate with stakeholders and respond to social and environmental challenges in real time (Schilke et al., 2018; Lee et al., 2018). For example, companies can use digital platforms to interact with customers, employees, and suppliers and collect feedback on their CSR initiatives (Manetti & Bellucci, 2016). This feedback can help companies identify areas where they can improve their performance and respond to emerging social and environmental challenges (Nayal et al., 2021).

Finally, digital technologies can support the development of transformative capabilities by enabling companies to innovate and develop new products and services that address social and environmental challenges (Bharadwaj et al., 2013). For example, companies can use digital technologies to develop new products made with sustainable materials or reduce the environmental impact of their operations. These innovations can create new opportunities for companies to create value while addressing social and environmental challenges.

In short, the integration of digital technologies align well with the principles of dynamic capabilities theory. These technologies advance sensing, capture, and transformation capabilities, allowing companies to better address CSR challenges and opportunities in a

rapidly changing digital landscape. Responsible digitization ensures that digital technologies are harnessed strategically to achieve CSR and TBL goals.

*H2: Digital technologies have a positive impact on corporate social responsibility.*

#### **4.4.3. Corporate entrepreneurship and corporate social responsibility**

Corporate entrepreneurship is a strategic and organisational approach that enables companies to identify and exploit new opportunities, innovate, and take calculated risks (Kreiser et al., 2021). CE has been widely studied in the literature as a critical factor in helping companies adapt to changes in the market environment and respond to changes in the industry (Sturm et al., 2023; García-Sánchez et al., 2018). Studies have shown that companies with high levels of entrepreneurship are better able to identify and respond to market opportunities and challenges. They are more innovative, flexible, and adaptable to changes in the environment, which enables them to remain competitive and sustain growth over time (Hitt et al., 2001; Wiklund & Shepherd, 2005).

Moreover, CE has also been recognized as a critical factor in enhancing corporate social responsibility. By fostering a culture of innovation, risk-taking, and social and environmental responsibility, CE can encourage companies to develop and implement proactive CSR strategies that create value for both the company and its stakeholders (Shepherd & Patzelt, 2011).

For example, a CE focused company may seek out partnerships with social and environmental organisations to develop new products or services that address critical social and environmental issues. It may also invest in sustainable practices and technologies that reduce its environmental impact and promote responsible business practices (İyigün, 2015). In doing so, the company can build a positive reputation and enhance stakeholder trust, which can translate into increased customer loyalty, employee satisfaction, and investor confidence.

Therefore, CE can be a critical factor in enhancing CSR by enabling companies to develop and implement proactive strategies that create value for both the company and its stakeholders. By fostering a culture of innovation, risk-taking, and social and environmental responsibility, companies can build a more sustainable and prosperous future for all (Bouguerra et al., 2022).

This is because, entrepreneurially oriented firms view CSR initiatives as opportunities to create value rather than just a cost incurred and view these activities as a way to create value for stakeholders and enhance their reputation, which in turn can lead to improved financial performance (Kraus et al., 2020). This mentality is consistent with the proactive orientation and search for opportunities that characterise entrepreneurial companies. (Dess & Lumpkin, 2001). Where CE can facilitate the development of social and environmental innovations (Frare & Beuren, 2021). such as sustainable innovations and green products and services, which elevate the company's ability to sense and respond to market opportunities (Qiu et al., 2020). In addition, entrepreneurial companies participate in CSR initiatives as a way to enhance their competitive advantage and build long-term value (Kraus et al., 2020). By participating in CSR initiatives, companies can enhance their reputation, build trust with stakeholders, and create new opportunities for growth and innovation (Nguyen et al., 2019). Moreover, entrepreneurial companies are more likely to engage in partnerships and collaborations with other organisations to promote corporate social responsibility (Kraus et al., 2020). Such collaborations can help companies leverage their strengths and capabilities to achieve common social and environmental goals, create social value and enhance corporate reputation (Arora et al., 2020).

Entrepreneurially oriented companies that adopt a proactive attitude towards CSR in their business model are more likely to pursue "value shared" strategies that create economic value while also addressing social and environmental issues (Font et al., 2016; Torugsa et al., 2013). Similarly, Lepoutre & Heene (2006) suggest that firms with high levels of employer organisation are more likely to adopt "hybrid business models," that is, to combine social, environmental, and financial goals. Additionally, entrepreneurial companies can use resilience and resilience to respond to emerging social and environmental issues (Kraus et al., 2020; Settembre-Blundo et al., 2021). Companies with a strong entrepreneurial streak are more likely to adapt to changes in their external environment and respond quickly and effectively to emerging social and environmental challenges. (Marshall et al., 2015; Jansson et al., 2017) found that companies with a strong employer were more likely to adopt sustainable practices in response to changing customer preferences and regulatory pressures. Therefore, entrepreneurial mentoring can enhance corporate social responsibility by enabling companies to identify and exploit new opportunities to create social and environmental value, develop the resilience and adaptability needed to respond to changing stakeholder expectations and organisational pressures, and mobilise networks and resources to drive change, social and environmental.

H3: Corporate entrepreneurship has a positive impact on corporate social responsibility.

#### **4.4.4. Corporate social responsibility and organisational resilience :**

Corporate Social Responsibility is a concept that indicates a company's commitment to conducting business in an ethical, socially responsible and sustainable manner. In recent years, there has been increasing recognition of the potential of corporate social responsibility to enhance organisational resilience and a company's ability to adapt and recover from disruptive events. Organisational resilience refers to the ability of an organisation to adapt, survive and thrive in the face of disruption, uncertainty and adversity. It is a multifaceted concept that includes different dimensions, such as risk management, agility, innovation, learning, and sustainability (Lengnick-Hall et al., 2011). CSR can help develop sustainable business models that enhance organisational resilience by enhancing stakeholder engagement, resource efficiency, building reputation and branding, and enhancing risk management and innovation (Mattera et al., 2021; Sajko et al., 2021; Rai et al., 2021). Moreover, corporate social responsibility enhances the company's ability to attract and retain talented employees, which in turn enhances organisational resilience (Bhattacharya et al., 2008).

CSR contributes to crisis management, as companies with strong CSR programs are better equipped to respond to and recover from crises (Adekola & Clelland, 2020; Wei & Kim, 2021). A strong culture of sustainability, often promoted through corporate social responsibility initiatives, can enhance organisational resilience by fostering a culture of innovation, adaptability, and risk-taking (Linnenluecke & Griffiths, 2010). And that by developing new products or services that meet the needs of consumers, companies can diversify their revenue sources and reduce their dependence on traditional markets, which may enhance their resilience in the face of market fluctuations. (Belás et al., 2021).

Moreover, CSR that focuses on environmental sustainability, ethical behaviour, and social responsibility enhances a company's reputation and brand value, which can be leveraged in times of crisis (Brammer et al., 2012). Companies with a strong reputation for social responsibility may be more trusted by stakeholders and better able to withstand reputational damage during a crisis. In addition, corporate social responsibility that focuses on promoting innovation and resilience can enhance a company's ability to adapt and respond to changes in the environment (Linnenluecke & Griffiths, 2010). For example, companies that have

developed innovative CSR initiatives may be better able to adapt to changes in consumer preferences or regulations.

Digital technologies can play an important role in building stakeholder engagement and communication, which is essential to developing trust and reputation. Corporate entrepreneurship encourages innovation and experimentation, which drives companies to explore new business opportunities and models (Hristov & Appolloni, 2021). This can help diversify sources of income, reduce dependence on specific markets or products, and create value for society and the company. This, in turn, enhances the contribution of social responsibility in building reputation, stakeholder engagement and risk management.

Digital technologies and corporate entrepreneurship complement and enhance corporate social responsibility, enabling companies to leverage social and environmental performance for business innovation and growth (Cardinali & De Giovanni, 2022c). In this context, dynamic capabilities of companies are developed that allow them to respond to digital disruptions, market fluctuations and stakeholder demands. These abilities can include strategic agility, innovation, collaboration, and learning. By integrating digital technologies, channelling entrepreneurship, and social responsibility into their organisational culture and strategy, companies can develop a shared vision and purpose that inspires and motivates stakeholders.

*H4: Corporate social responsibility has a positive impact on organisational resilience.*

## **4.5. RESEARCH METHOD**

### **4.5.1. Sample and data collection**

We collected data from the province of Andalusia, Spain, due to its strong and growing technology sector, supported by various initiatives and programs aimed at promoting innovation and entrepreneurship. Andalusia is recognized as one of the best regions in Spain for investing in research and development. In 2020, Andalusia received an inward investment of €1,627,247, which marked a 5.8% increase compared to the previous year, the largest increase in the past decade according to the Regional Government of Andalusia (Asensio, 2022).

Furthermore, Andalusia has been actively investing in digital innovation, particularly in promoting entrepreneurship and innovation in the digital sector. This has resulted in the

establishment of innovation centres and technology parks in the region, including the Andalusian Technology Park (PTA) and the Andalusian Digital Content Center (CDAN), (Andalusia - Smart Specialisation Platform, 2022; Marchese et al., 2011). Moreover, Andalusia has a rich tradition of social responsibility, which is evident in its CSR initiatives related to environmental sustainability, social inclusion, and economic development, as reported by the Andalusian Council of Chambers of Commerce. Additionally, the province has a diversified economy that relies heavily on small and medium-sized enterprises (SMEs), which are often more flexible and adaptable to changes in the market. According to data from the Andalusian Institute of Statistics and Mapping, there were over 650,000 SMEs in the region in 2019, accounting for over 99% of all companies in the province (Instituto De Estadística Y Cartografía De Andalucía, 2019).

Our sampling strategy employed a stratified approach, encompassing 259 small and medium-sized enterprises in the province of Andalusia, Spain, which were selected during the period from February to September 2020, during the early stages of the Covid-19 crisis. During this period, companies made determined efforts to maintain their survival and support their communities. Many companies used social media to communicate with their customers, and many transformed their operations by relying on digital technologies. The primary data for this study was collected through a survey questionnaire that underwent a thorough review process. Several general managers, academics, and consultants who are knowledgeable about complexity, information systems, and social media reviewed the survey measures for content, wording, and comprehension. Based on their feedback, the questionnaire was revised to ensure its validity and reliability. To test the revised questionnaire, a sample of 376 participants was used, and 259 responses were obtained, resulting in a response rate of 68.88% (Table 1). Business owners were the primary informants, accounting for 57.1% of the sample, as they possess comprehensive knowledge about their companies and their actions and plans related to information systems and social media to achieve corporate goals and improve performance (Baer & Frese, 2003).

To increase the response rate, a report summarising the study results was provided to the participants. All individual responses were kept strictly confidential, and the information was presented at an aggregate level to reduce potential desirability bias. Non-response bias was assessed by examining potential differences between early and late responders. The results indicated that there were no significant differences between first and late responders in terms of



terminology, suggesting that non-response bias did not significantly impact the findings of the study.

Table 1: Technical Details of the Research

Geographical location	Spain (Andalusia)
Methodology	Structured questionnaire
Universe of population	15,862 firms
Sample size (response size)	376 firms (259 firms, 68.88%)
Sample error	5%
Confidence level	95%, p-q=0.50; z=1.96
Period of data collection	September 2020

## 4.5.2. Measures

### 4.5.2.1. Digital technologies:

We measured digital technologies using five items from Li et al,( 2020) and Cardinali & De Giovanni, (2022). CFA ( $\chi^2_5 = 5,390$ , NFI = 0.99, NNFI = 0.99, GFI = 0.99, CFI = 0.99) showed that the scale was one-dimensional and had validity and reliability ( $\alpha = 0.908$ ).

### 4.5.2.2 Corporate entrepreneurship:

We measured CE as a four-dimensional structure (Zahra, 1993; Knight, 1997). Accordingly, we designed a four-item scale (1 “Totally disagree,” 7 “Totally agree”) to measure the construct. CE measure that constitutes innovativeness 4 items, Proactiveness 5 items, self-renewal 5 items and New Business Venturing 4 items. ( $\chi^2_{22} = 2,881$ , NFI = .99, NNFI = .98, GFI = .99, CFI = .98, IFI = .99). The four-dimensional scale has been demonstrated to possess satisfactory levels of validity and reliability ( $\alpha = 0.939$ ). This is supported by the results of numerous studies conducted on the scale, which have consistently found high levels of internal consistency and test-retest reliability.

#### **4.5.2.3 Corporate social responsibility:**

Many researchers analyse CSR using reliable and valid metrics that allow it to be measured. We relied on a scale consisting of twelve elements and four dimensions (Carroll, 1991; Dowell et al., 2000; Clarkson, 1995). We develop a confirmatory factor analysis to validate the scales (84= 50,113, NFI = .98, NNFI = .98, GFI = .99, CFI = .99, IFI = .99) and show that the scale is four-dimensional and has adequate validity and reliability ( $\alpha = 0.896$ ).

#### **4.5.2.4 Organisational resilience:**

The study uses a scale of 12 developed by Blanco et al. (2017) and Notario-Pacheco et al. (2011), Based on the original scale made by Connor and Davidson (2003). (1 “totally disagree”, 7 “totally agree”). These items are duly adapted to the present study. The authors develop a confirmatory factor analysis to validate the scales (112= 12,602, NFI = .99, NNFI = .98, GFI = .99, CFI = .99, IFI = .99) and show that the scale is one-dimensional and has adequate validity and reliability ( $\alpha = 0.917$ ).

#### **4.5.3. Common method bias, validity, and reliability**

To address common method bias in our data, we utilised three models according to Cote and Buckley (1987). The first model was the "traits-only" model, in which a factor was loaded initially. This model indicated that the observed pattern of bias was due to a common latent variable that drove the relationship between predictor and criterion variables. The cofactor acted as a confounding variable that explained the spurious relationship between the variables of interest. The second model we employed was the "style factor" attribute method model. In this model, each intrinsic variable was assumed to have its own latent attribute factor and a unique style factor. Every indicator was loaded on a latent factor, and the observed variance among intrinsic variables was assumed to be due to covariance among trait factors as well as covariance among method factors. The third model we used was the interrelated attributes method model, which combined the first and second models. This model was similar to the attributes method model but allowed for a common factor that affected both objective and method variables, in addition to unique attribute and method factors for each intrinsic variable.

By utilising these three models, we were able to assess and address the potential influence of common method bias in our data. These three models provide different explanations for the

presence of common method bias in the data, and common method bias was shown to have no significant effect on our data.

In addition to the aforementioned methods, we also conducted a one-factor Harman test, proposed by Harman (1960), to further assess the presence of common method bias. This involved performing a principal component analysis (PCA) on all the items used in the study and examining the variance explained by the first factor. If a single factor explains a majority of the variance (e.g., more than 50%), it may suggest the presence of common method bias. However, it should be noted that this method has been criticised for its simplicity and potential limitations.

The results of the one-factor Harman test showed no evidence of a single factor explaining the majority of the variance, indicating that a bias factor is unlikely to explain the differences in the measures (Table 2). Furthermore, we evaluated the reliability and validity of the multicomponent formulations (Table 2), which provided support for convergent validity. The psychometric properties of the measurements used in the study were also analysed (Table 2), showing satisfactory levels of reliability, with composite dependencies ranging from 0.93 to 0.95, and coefficients of variation ranging from 0.66 to 0.77, higher than the recommended minimum value of 0.50 (Fornell and Larcker, 1981). All factor loadings were significant ( $t > 13.71$ ) and above the recommended limit ( $\lambda > 0.70$ ).

**Table 2. Validity, reliability and internal consistency.**

	$\lambda^*$	R2	A. M.		
<b>Digital technologies</b>					
DT1	0.878	0.771	0.229		
DT2	0.886	0.785	0.215	$\alpha$	0.908
DT3	0.875	0.766	0.234	avg smt	0.721
DT4	0.865	0.748	0.252	cr	0.947
DT5	0.732	0.536	0.464		
<b>Corporate</b>					

<b>Entrepreneurship</b>					
Proactiveness	0.961	0.924	0.076		
Innovativeness	0.935	0.874	0.126	a	0.939
New business	0.939	0.882	0.118	avg smt	0.878
Self-renewal	0.913	0.834	0.166	cr	0.970
<b>Corporate social responsibility</b>					
Economic	0.961	0.924	0.076		
Environmental	0.985	0.970	0.030	a	0.896
Social	0.971	0.943	0.057	avg smt	0.938
Governance	0.957	0.916	0.084	cr	0.985
<b>Organisational resilience</b>					
LOR1	0.719	0.517	0.483		
LOR2	0.742	0.551	0.449	a	0.917
LOR3	0.810	0.656	0.344	avg	0.665
LOR4	0.879	0.773	0.227	cr	0.954
LOR5	0.898	0.806	0.194		
LOR6	0.839	0.704	0.296		
LOR7	0.805	0.648	0.352		

Note:  $\lambda^*$ =Standardised Structural Coefficient;  $R^2$ =Reliability;  $\alpha$ =Cronbach Alpha; C. R.=Compound

Reliability; S. V.=Shared Variance; f. p.=fixed parameter; A. M.=Adjustment Measurements; \* $p<.05$ ; \*\* $p<.01$ ; \*\*\* $p<.001$ (two-tailed).

Furthermore, exploratory factor analysis (EFA) was conducted to examine loading factors and structure factors for possible bias due to common methods. Results showed that one factor

appeared for each proposed construct, supporting the evidence for one-dimensionality. Additionally, confirmatory factor analysis (CFA) was performed to assess combined method bias, wherein a specific measurement model was tested that included separate factors for each construct as well as a common method factor that captured any variance due to the method of the data set. By comparing the fit of the measurement model with and without the co-method factor, researchers can assess the effect of co-method bias on the measurement model (Table 3).

Overall, the findings from the various analyses conducted, including PCA, EFA, and CFA, did not indicate significant evidence of common method bias in our data, suggesting that the results obtained are less likely to be influenced by such bias (Podsakoff et al., 2003).

TABLE 3 Results of confirmatory factor analysis.

	$\chi^2/df$	CFI	IFI	RMSEA	SRMR
Recommended values	$\leq 3$	$\geq 0.9$	$\geq 0.9$	$\leq 0.08$	$\leq 0.08$
Full model CFA	1.41	0.97	0.97	0.052	0.046
One-factor model CFA	1.43	0.68	0.68	0.159	0.175

Note: CFI, comparative fit index; CFA, confirmatory factor analysis; NNFI, non-normed fit index; SRMR, standardised root mean square residual; RMSEA, root mean square error of approximation

## 4.6. RESULTS

Table 4 presents the descriptive statistics including means, standard deviations, and the multifactorial correlation matrix for the study variables. Prior to analysis, data was assessed for normality and outliers, and no significant violations were identified.

To test the hypotheses, hierarchical regression analysis (Table 5) was conducted using a stepwise approach. Control variables were included in the first model (Form 1), followed by the introduction of digital technologies as an independent variable in Model 2. The results supported the first hypothesis, which proposed that digital technologies enhance entrepreneurial orientation ( $\beta = 0.14$ ,  $p < 0.01$ ), accounting for 17.1% of the variance in entrepreneurial orientation (EO).

The second hypothesis suggested that digital technologies contribute to corporate social responsibility (CSR). Model 3 examined the role of this relationship and found a significant



	Model 1	Model 2		Model 3		Model 4		Model 5	
Constant	3.522 (11.396)	2.972 (9.601)		2.983 (17.500)		2.632 (13.086)		2.577 (6.648)	
Job position	0.201 (3.582)	0.200 (3.770)		0.063 (2.156)		0.021 (0.705)		-0.007 (-0.158)	
Business owner	0.211 (1.398)	0.222 (1.553)		0.030 (0.383)		-0.022 (-0.271)		-0.161 (-1.360)	
Years working	-0.132 (-2.256)	-0.105 (-1.886)		-0.069 (-2.257)		-0.061 (-1.934)		0.017 (0.374)	
DT		0.141 (5.488)	0.991 (1.009)	0.099 (6.984)	0.991 (1.009)			0.127 (2.775)	0.791 (1.264)
CE						0.209 (6.311)	0.927 (1.078)	0.319 (5.902)	0.758 (1.320)
CSR								0.371 (3.833)	0.747 (1.339)
R2	0.073	0.171		0.202		0.178		0.333	
Adjusted R2	0.062	0.158		0.189		0.165		0.318	
F	6.671	13.103		16.076		13.726		21.011	
Standard Error	0.863	0.818		0.45		0.457		0.672	

Note: \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$  (two-tailed); TOL = Tolerance; VIF = Variance Inflation Factor.

## 4.7. Conclusions

### 4.7.1. Discussion

Based on the theory of dynamic capabilities (Teece, 2007; Teece et al., 1997), this study explored how corporate social responsibility enhanced by digital technologies and entrepreneurial orientation contribute to enhancing organisational resilience. In addition, dynamic capabilities refer to the organisation's ability to adapt and respond to changing environments through the integration and coordination of internal and external resources, processes, and procedures. Research indicates that digital technologies play an important role in enhancing entrepreneurial orientation and organisational resilience through Corporate Social Responsibility based on dynamic capabilities. The first outcome of the study (Digital technologies and their role in entrepreneurial orientation) is shown by providing organisations with opportunities for innovation, proactivity and risk-taking. For example, digital technologies

enable organisations to access and analyse large amounts of data, allowing them to identify emerging market trends, customer preferences, and competitor activities (Brynjolfsson & McAfee, 2015). This data-driven approach enables organisations to proactively identify and capitalise on new business opportunities, fostering an entrepreneurial mindset. Moreover, digital technologies facilitate communication and collaboration within organisations, which is essential for guiding entrepreneurship. Digital tools such as project management platforms, virtual communication tools, and collaboration software enable employees to work together seamlessly, share ideas, and contribute to the development of new products or services (McDougall et al., 2020). This collaborative approach promotes innovation and proactivity among employees, which leads to entrepreneurial direction.

Moreover, digital technologies enable organisations to try and test new ideas and concepts at a faster pace and at a lower cost. For example, organisations can use digital marketing and e-commerce platforms to quickly launch and test new products or services in the market, collect customer feedback, and iterate their offering accordingly (Sjödin et al., 2020; Srinivasan & Venkatraman, 2018). This iterative approach allows organisations to learn from failures, make necessary adjustments, and continue to enhance their entrepreneurial orientation. CSR based on dynamic capabilities. Digital technologies facilitate organisations in enhancing transparency and accountability to their stakeholders (Mackey & Cuomo, 2020). Through digital platforms such as social media and corporate websites, organisations can communicate their CSR initiatives, share progress and results, and engage with stakeholders in a transparent and interactive way. This enhances trust and credibility, and enhances the organisation's reputation and resilience in times of crisis or uncertainty (McQueen, 2007).

Furthermore, digital technologies enable organisations to implement sustainable practices and contribute to corporate social responsibility based on dynamic capabilities. For example, digital tools for supply chain management can help organisations track and monitor the environmental and social performance of suppliers, ensure compliance with sustainability standards, and make informed decisions about their sourcing practices (Sodhi & Tang, 2019; Manavalan & Sultan, 2019). This allows organisations to integrate sustainability into their operations, products, and services, contribute to environmental and social well-being, and enhance organisational resilience.

In addition, organisations can use digital technologies to engage in social innovation and address social challenges through corporate social responsibility. Organisations can use digital



technologies to develop innovative products or services that address social issues such as poverty, inequality, health, or education (George et al., 2021). These social innovation initiatives not only contribute to the betterment of society, but also enhance the organisation's reputation and resilience by demonstrating its commitment to corporate social responsibility and dynamic capabilities. Mackey & Cuomo, (2020) indicate that digital technologies enable organisations to enhance transparency, accountability, and engagement with stakeholders, which contributes to organisational resilience through corporate social responsibility. In addition, research by Sodhi & Tang, (2019) confirms that digital tools for supply chain management can support sustainable practices and enhance corporate social responsibility.

When organisations integrate CSR initiatives into their entrepreneurial orientation, it can lead to several benefits that enhance organisational resilience. Firstly, CSR initiatives that align with entrepreneurial orientation can drive innovation. For instance, organisations that prioritise CSR may invest in research and development to create innovative solutions that address social or environmental issues (Asongu, 2007). This innovation can not only benefit society but also enhance the organisation's competitive advantage and ability to adapt to changing market dynamics, thus contributing to organisational resilience.

Secondly, CSR initiatives that align with entrepreneurial orientation can enhance stakeholder relationships. Organisations that engage in CSR activities demonstrate their commitment to social and environmental concerns, which can foster trust and goodwill among stakeholders such as customers, employees, investors, and communities (Xiaotian et al., 2021). Strong stakeholder relationships can provide organisations with support and resources during challenging times, such as crises or disruptions, thereby enhancing organisational resilience.

Thirdly, CSR initiatives that align with entrepreneurial orientation can contribute to organisational learning and organisational culture. Organisations that prioritise CSR may establish a culture of learning, experimentation, and continuous improvement, which can foster entrepreneurial mindset and agility (Jalilvand et al., 2018). This can enable organisations to better adapt to changing circumstances, learn from failures, and proactively respond to challenges, thereby enhancing organisational resilience.

Finally, CSR initiatives that align with entrepreneurial orientation can also enhance an organisation's reputation and brand image. Organisations that demonstrate a commitment to social responsibility and entrepreneurial orientation are likely to be perceived as socially responsible, ethical, and trustworthy by stakeholders and society (De Roeck & Farooq, 2018).

A positive reputation and brand image can contribute to organisational resilience by safeguarding the organisation's market share, customer loyalty, and stakeholder support, even during turbulent times.

In conclusion, when CSR initiatives are aligned with entrepreneurial orientation, it can contribute to enhancing organisational resilience by driving innovation, enhancing stakeholder relationships, fostering a culture of learning, and enhancing reputation and brand image. Organisations that effectively integrate CSR initiatives into their entrepreneurial orientation are likely to be more adaptable, innovative, and socially responsible, positioning themselves as resilient and sustainable in today's dynamic business environment.

#### **4.7.2 Theoretical contribution**

Dynamic capabilities theory encompasses a company's ability to cultivate and deploy the essential capabilities essential for sustaining a competitive advantage and achieving long-term success (Teece, 2017). This theory underscores the significance of firms' capacity to adapt and innovate in response to the rapidly evolving external environment, facilitated by digital technologies (Teece, 2007). According to this theory, organisations can enhance their dynamic capabilities by establishing processes, routines, and organisational structures that enable them to sense environmental changes, seize opportunities, and reconfigure their resources and capabilities (Teece, 2007). In the realm of digital technologies, companies can foster dynamic capabilities through investments in digital infrastructure, partnerships with digital technology firms, and the cultivation of a culture that embraces innovation and experimentation (Teece, 2018).

These capabilities allow firms to sense, seize, and transform opportunities and threats in their environments (Teece et al., 1997). In the context of corporate social responsibility, dynamic capabilities can help companies identify, create and gain value by engaging with stakeholders and responding to social and environmental challenges (Dentoni et al., 2016; Santa-Maria et al., 2021). Digital technologies have emerged as a critical enabler of dynamic capabilities, particularly in the area of corporate social responsibility. Digital technologies provide new opportunities for companies to collect and analyse data, collaborate with stakeholders, and innovate to address social and environmental challenges (Bharadwaj et al., 2013).

DCT theory focuses on a company's ability to adapt to changing environments and develop new capabilities over time. In the context of EO and CSR, DCT theory suggests that companies with a strong employer are better able to adapt to changing social and environmental pressures and to develop new capabilities related to CSR. For example, an entrepreneurial company may be more likely to develop new capabilities related to social or environmental sustainability in response to changing stakeholder expectations for improved environmental and financial performance (Shafique et al., 2021).

Overall, DCT theory suggests that an employers' organisation can be a powerful driver of CSR, by enabling companies to develop dynamic capabilities aligned with social and environmental objectives. By leveraging EO, a company can create long-term value for its stakeholders, while enhancing its reputation, competitive advantage, and overall sustainability (Valdez-Juárez et al., 2021).

According to the DCT, CSR can enhance organisational resilience by building the company's ability to adapt and respond to changes in the environment (Karman & Savanevičienė, 2021). This is done in several ways, as CSR initiatives that focus on building strong relationships with stakeholders, such as customers, employees, suppliers, and local communities, can enhance a company's resilience by creating a network of support that can be drawn upon in times of crisis (Linnenluecke & Griffiths 2010; Baolong & Cao, 2022). For example, companies that have established strong relationships with local communities may be better able to access resources and support during a natural disaster. For example, by developing strong relationships with suppliers and promoting sustainable practices throughout the supply chain, companies can reduce the risk of supply chain disruptions and ensure continuity of operations in times of crisis (Brammer et al., 2012).

CSR that focuses on promoting employee development, knowledge sharing, and learning can enhance a company's ability to adapt to changes in the environment (Baolong & Cao, 2022). By creating a culture of continuous learning, companies can build their knowledge and skill base, which can be leveraged to develop new products, services, or business models that enhance their agility (Battisella et al., 2017).

#### **4.7.3. Managerial implications**

Digital technologies enable organisations to implement sustainable practices and contribute to corporate social responsibility based on dynamic capabilities. For example, digital

tools for supply chain management can help organisations track and monitor the environmental and social performance of suppliers, ensure compliance with sustainability standards, and make informed decisions about their sourcing practices (Sodhi & Tang, 2019; Manavalan & Sultan, 2019). This allows organisations to integrate sustainability into their operations, products, and services, contribute to environmental and social well-being, and enhance organisational resilience.

In addition, organisations can use digital technologies to engage in social innovation and address social challenges through corporate social responsibility. Organisations can use digital technologies to develop innovative products or services that address social issues such as poverty, inequality, health, or education (George et al., 2021). These social innovation initiatives not only contribute to the betterment of society, but also enhance the organisation's reputation and resilience by demonstrating its commitment to corporate social responsibility and dynamic capabilities. Mackey & Cuomo, (2020) indicate that digital technologies enable organisations to enhance transparency, accountability, and engagement with stakeholders, which contributes to organisational resilience through corporate social responsibility. In addition, research by Sodhi & Tang, (2019) confirms that digital tools for supply chain management can support sustainable practices and enhance corporate social responsibility.

When organisations integrate CSR initiatives into their entrepreneurial orientation, it can lead to several benefits that enhance organisational resilience. Firstly, CSR initiatives that align with entrepreneurial orientation can drive innovation. For instance, organisations that prioritise CSR may invest in research and development to create innovative solutions that address social or environmental issues (Asongu, 2007). This innovation can not only benefit society but also enhance the organisation's competitive advantage and ability to adapt to changing market dynamics, thus contributing to organisational resilience.

Secondly, CSR initiatives that align with entrepreneurial orientation can enhance stakeholder relationships. Organisations that engage in CSR activities demonstrate their commitment to social and environmental concerns, which can foster trust and goodwill among stakeholders such as customers, employees, investors, and communities (Xiaotian et al., 2021) Strong stakeholder relationships can provide organisations with support and resources during challenging times, such as crises or disruptions, thereby enhancing organisational resilience.

Thirdly, CSR initiatives that align with entrepreneurial orientation can contribute to organisational learning and organisational culture. Organisations that prioritise CSR may

establish a culture of learning, experimentation, and continuous improvement, which can foster entrepreneurial mindset and agility (Jalilvand et al., 2018). This can enable organisations to better adapt to changing circumstances, learn from failures, and proactively respond to challenges, thereby enhancing organisational resilience.

Finally, CSR initiatives that align with entrepreneurial orientation can also enhance an organisation's reputation and brand image. Organisations that demonstrate a commitment to social responsibility and entrepreneurial orientation are likely to be perceived as socially responsible, ethical, and trustworthy by stakeholders and society (De Roeck & Farooq, 2018). A positive reputation and brand image can contribute to organisational resilience by safeguarding the organisation's market share, customer loyalty, and stakeholder support, even during turbulent times.

In conclusion, when CSR initiatives are aligned with entrepreneurial orientation, it can contribute to enhancing organisational resilience by driving innovation, enhancing stakeholder relationships, fostering a culture of learning, and enhancing reputation and brand image. Organisations that effectively integrate CSR initiatives into their entrepreneurial orientation are likely to be more adaptable, innovative, and socially responsible, positioning themselves as resilient and sustainable in today's dynamic business environment.

#### **4.7.4. Limitation and future research**

There are some limitations in this study that need to be taken into account when interpreting the results. The results of the study are not generalizable to all types of organisations or industries. The study may need to focus on specific contexts and settings and on a larger sample, especially since our focus was on small and medium enterprises in one province, Andalusia. Therefore, it is difficult to generalise these results to all countries and sectors, as well as to large companies. We encourage future studies to study digital technologies of different types and levels and their role in promoting entrepreneurial orientation and social responsibility in broader sectors and large multinational companies.

Second, the study uses a cross sectional design, which limits the ability to establish causal relationships between variables. Longitudinal studies may be required to investigate changes in social responsibility, digital technologies, entrepreneurial orientation, and organisational resilience over time. Third, organisational resilience is a complex construct that may take time to emerge. Longitudinal studies examining the long-term effects of social responsibility

enhanced by digital technologies and entrepreneurial mentoring on organisational resilience are therefore necessary and would provide more robust evidence.

Moreover, there may be other variables mediating or mitigating the relationship between social responsibility, digital technologies, entrepreneurial orientation, and organisational resilience. Future research can explore these variants to better understand the underlying mechanisms.

Third, future studies can investigate the mechanisms through which social responsibility, digital technologies, and entrepreneurial mentoring enhance organisational resilience. Also examining the role of leadership in promoting social responsibility, digital technologies and entrepreneurial direction in enhancing organisational resilience.

In addition, future research could be directed to investigate the cultural and contextual factors that influence the adoption and effectiveness of social responsibility, digital technologies, and entrepreneurial orientation in enhancing organisational resilience.

Also, an exploration of the moderating effects of organisational size, industry, and geographic location on the relationship between social responsibility, digital technologies, entrepreneurial orientation, and organisational resilience.

All in all, further research is needed to fully understand the complex relationships between CSR, digital technologies, entrepreneurial orientation, and organisational resilience in SMEs. Future research should address the limitations and consider the future research directions outlined in this paper to provide a more comprehensive understanding of the role of these factors in enhancing SME resilience.

#### **4.7.5. Conclusion**

The current study sheds new light on the relationship between social responsibility and organisational resilience. There is growing evidence to suggest that corporate social responsibility (CSR) bolstered by digital technologies and entrepreneurial orientation can positively influence the organisational resilience of small and medium enterprises (SMEs). By integrating social responsibility initiatives and digital technologies into their operations, SMEs can improve their ability to adapt and respond to changes in the business environment, thereby enhancing their overall resilience. Additionally, an entrepreneurial orientation can help SMEs identify and pursue new opportunities, further bolstering their resilience.

SMEs can benefit from integrating social responsibility and digital technologies into their operations while fostering an entrepreneurial mindset to enhance their resilience in an increasingly competitive and rapidly changing business landscape.

#### 4.8. References

- Adekola, J., & Clelland, D. (2020). Two sides of the same coin: Business resilience and community resilience. *Journal of Contingencies and Crisis Management*, 28(1), 50–60. <https://doi.org/10.1111/1468-5973.12275>
- Agudo-Valiente, J. M., Garcés-Ayerbe, C., & Salvador, M. (2015). Corporate Social Performance and Stakeholder Dialogue Management. *Corporate Social Responsibility and Environmental Management*, 22(1), 13–31. <https://doi.org/10.1002/csr.1324>
- Ambrosini, V., & Bowman, C. (2009). What are dynamic capabilities and are they a useful construct in strategic management? *International Journal of Management Reviews*, 11(1), 29–49. <https://doi.org/10.1111/j.1468-2370.2008.00251.x>
- Andalusia - Smart Specialisation Platform. (2022, May 17). Retrieved from <https://s3platform.jrc.ec.europa.eu/region-page-test/-/regions/ES61>
- Arora, A., Arora, A. S., Sivakumar, K., & Burke, G. (2020). Strategic sustainable purchasing, environmental collaboration, and organizational sustainability performance: the moderating role of supply base size. *Supply Chain Management*, 25(6), 709–728. <https://doi.org/10.1108/scm-07-2019-0284>
- Asensio, C. (2022, February 25). Andalucía es la tercera que más invierte en I+D pero de las últimas en gasto por habitante. *elEconomista.es*. Retrieved from <https://www.eleconomista.es>
- Asongu, J. (2007). Innovation as an argument for corporate social responsibility. *Journal of Business and Public Policy*, 1(3), 1–20. <https://doi.org/10.1108/00251741111183843>
- Baer, M., & Frese, M. (2003). Innovation is not enough: climates for initiative and psychological safety, process innovations, and firm performance. *Journal of Organizational Behavior*, 24(1), 45–68. <https://doi.org/10.1002/job.179>
- Bai, C., Quayson, M., & Sarkis, J. (2021). COVID-19 pandemic digitization lessons for sustainable development of micro-and small- enterprises. *Sustainable Production and Consumption*, 27, 1989–2001. <https://doi.org/10.1016/j.spc.2021.04.035>

- Baolong, Y., & Cao, X. (2022a). Do corporate social responsibility practices contribute to green innovation? The mediating role of green dynamic capability. *Technology in Society*, 68, 101868. <https://doi.org/10.1016/j.techsoc.2022.101868>
- Baolong, Y., & Cao, X. (2022b). Do corporate social responsibility practices contribute to green innovation? The mediating role of green dynamic capability. *Technology in Society*, 68, 101868. <https://doi.org/10.1016/j.techsoc.2022.101868>
- Battistella, C., De Toni, A., De Zan, G., & Pessot, E. (2017). Cultivating business model agility through focused capabilities: A multiple case study. *Journal of Business Research*, 73, 65–82. <https://doi.org/10.1016/j.jbusres.2016.12.007>
- Belás, J., Čera, G., Dvorský, J., & Cepel, M. (2021). Corporate social responsibility and sustainability issues of small- and medium-sized enterprises. *Corporate Social Responsibility and Environmental Management*, 28(2), 721–730. <https://doi.org/10.1002/csr.2083>
- Berman, S. J. (2012). Digital transformation: opportunities to create new business models. *Strategy & Leadership*, 40(2), 16–24. <https://doi.org/10.1108/10878571211209314>
- Bharadwaj, A., Sawy, O. a. E., Pavlou, P. A., & Venkatraman, N. (2013). Digital Business Strategy: Toward a Next Generation of Insights. *Social Science Research Network*. Retrieved from [https://papers.ssrn.com/sol3/Delivery.cfm/SSRN\\_ID2742300\\_code2226320.pdf?abstractid=2742300](https://papers.ssrn.com/sol3/Delivery.cfm/SSRN_ID2742300_code2226320.pdf?abstractid=2742300)
- Bhattacharya, C. B., Sen, S., & Korschun, D. (2008). Using Corporate Social Responsibility to Win the War for Talent. *MIT Sloan Management Review*, 49(2), 37–44. Retrieved from <https://dialnet.unirioja.es/servlet/articulo?codigo=2555320>
- Bouguerra, A., Hughes, M., Cakir, M. S., & Tatoglu, E. (2022). Linking Entrepreneurial Orientation to Environmental Collaboration: A Stakeholder Theory and Evidence from Multinational Companies in an Emerging Market. *British Journal of Management*, 34(1), 487–511. <https://doi.org/10.1111/1467-8551.12590>
- Brammer, S., Jackson, G., & Matten, D. (2012). Corporate Social Responsibility and institutional theory: new perspectives on private governance. *Socio-economic Review*, 10(1), 3–28. <https://doi.org/10.1093/ser/mwr030>
- Brynjolfsson, E., & McAfee, A. (2015). The second machine age: work, progress, and prosperity in a time of brilliant technologies. *Choice Reviews Online*, 52(06), 52–3201. <https://doi.org/10.5860/choice.184834>



- Bughin, J. (2022). Are you resilient? Machine learning prediction of corporate rebound out of the Covid-19 pandemic. *Managerial and Decision Economics*, 44(3), 1547–1564. <https://doi.org/10.1002/mde.3764>
- Cardinali, P. G., & De Giovanni, P. (2022). Responsible digitalization through digital technologies and green practices. *Corporate Social Responsibility and Environmental Management*, 29(4), 984–995. <https://doi.org/10.1002/csr.2249>
- Carroll, A. B. (1991). The pyramid of corporate social responsibility: Toward the moral management of organizational stakeholders. *Business Horizons*, 34(4), 39–48. [https://doi.org/10.1016/0007-6813\(91\)90005-g](https://doi.org/10.1016/0007-6813(91)90005-g)
- Chatterjee, S., Chaudhuri, R., & Vrontis, D. (2022). Investigating the impacts of microlevel CSR activities on firm sustainability: mediating role of CSR performance and moderating role of top management support. *Cross Cultural & Strategic Management*, 30(1), 123–141. <https://doi.org/10.1108/ccsm-12-2021-0228>
- Chesbrough, H., Lettl, C., & Ritter, T. (2018). Value Creation and Value Capture in Open Innovation. *Journal of Product Innovation Management*, 35(6), 930–938. <https://doi.org/10.1111/jpim.12471>
- Ciasullo, M. V., Montera, R., & Douglas, A. D. (2022). Building SMEs' resilience in times of uncertainty: the role of big data analytics capability and co-innovation. *Transforming Government: People, Process and Policy*, 16(2), 203–217. <https://doi.org/10.1108/tg-07-2021-0120>
- Clarkson, M. B. (1995). A Stakeholder Framework for Analyzing and Evaluating Corporate Social Performance. *Academy of Management Review*, 20(1), 92–117. <https://doi.org/10.5465/amr.1995.9503271994>
- Cote, J. A., & Buckley, M. R. (1987). Estimating Trait, Method, and Error Variance: Generalizing across 70 Construct Validation Studies. *Journal of Marketing Research*, 24(3), 315. <https://doi.org/10.2307/3151642>
- Covin, J. G., & Slevin, D. P. (1989). Strategic management of small firms in hostile and benign environments. *Strategic Management Journal*, 10(1), 75–87. <https://doi.org/10.1002/smj.4250100107>
- De Roeck, K., & Farooq, O. (2018). Corporate Social Responsibility and Ethical Leadership: Investigating Their Interactive Effect on Employees' Socially Responsible Behaviors. *Journal of Business Ethics*, 151(4), 923–939. <https://doi.org/10.1007/s10551-017-3656-6>

- Dentoni, D., Bitzer, V., & Pascucci, S. (2016). Cross-Sector Partnerships and the Co-creation of Dynamic Capabilities for Stakeholder Orientation. *Journal of Business Ethics*, 135(1), 35–53. <https://doi.org/10.1007/s10551-015-2728-8>
- Dess, G. G., & Lumpkin, G. T. (2001). Linking Two Dimensions of Entrepreneurial Orientation to Firm Performance: The Moderating Role of Environment and Industry Life Cycle. *Social Science Research Network*. Retrieved from [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1510993](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1510993)
- DiBella, J., Forrest, N., Burch, S., Rao-Williams, J., Ninomiya, S. M., Hermelingmeier, V., & Chisholm, K. (2022). Exploring the potential of SMEs to build individual, organizational, and community resilience through sustainability-oriented business practices. *Business Strategy and the Environment*, 32(1), 721–735. <https://doi.org/10.1002/bse.3171>
- DiMaggio, P., & Powell, W. W. (1983). The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields. *American Sociological Review*, 48(2), 147. <https://doi.org/10.2307/2095101>
- Do, H., Budhwar, P., Shipton, H., Nguyen, H. X., & Nguyen, B. K. (2021). Building organizational resilience, innovation through resource-based management initiatives, organizational learning and environmental dynamism. *Journal of Business Research*, 141, 808–821. <https://doi.org/10.1016/j.jbusres.2021.11.090>
- Dowell, G., Hart, S. L., & Yeung, B. (2000). Do Corporate Global Environmental Standards Create or Destroy Market Value? *Management Science*, 46(8), 1059–1074. <https://doi.org/10.1287/mnsc.46.8.1059.12030>
- Duchek, S. (2020). Organizational resilience: a capability-based conceptualization. *Business Research*, 13(1), 215–246. <https://doi.org/10.1007/s40685-019-0085-7>
- Elkington, J. (1998). Partnerships from cannibals with forks: The triple bottom line of 21st-century business. *Environmental Quality Management*, 8(1), 37–51. <https://doi.org/10.1002/tqem.3310080106>
- Feiyang, G., Tie-Nan, W., & Tang, L. (2022). Organizational resilience under COVID-19: the role of digital technology in R&D investment and performance. *Industrial Management and Data Systems*, 123(1), 41–63. <https://doi.org/10.1108/imds-04-2022-0220>
- Font, X., Guix, M., & Bonilla-Priego, M. J. (2016). Corporate social responsibility in cruising: Using materiality analysis to create shared value. *Tourism Management*, 53, 175–186. <https://doi.org/10.1016/j.tourman.2015.10.007>

- Fornell, C., & Larcker, D. F. (1981). Structural Equation Models with Unobservable Variables and Measurement Error: Algebra and Statistics. *Journal of Marketing Research*, 18(3), 382–388. <https://doi.org/10.1177/002224378101800313>
- Frare, A. B., & Beuren, I. M. (2021). The role of green process innovation translating green entrepreneurial orientation and proactive sustainability strategy into environmental performance. *Journal of Small Business and Enterprise Development*, 29(5), 789–806. <https://doi.org/10.1108/jsbed-10-2021-0402>
- García-Sánchez, E., García-Morales, V. J., & Martín-Rojas, R. (2018). Analysis of the influence of the environment, stakeholder integration capability, absorptive capacity, and technological skills on organizational performance through corporate entrepreneurship. *International Entrepreneurship and Management Journal*, 14(2), 345–377. <https://doi.org/10.1007/s11365-017-0436-9>
- George, G., Merrill, R. K., & Schillebeeckx, S. J. (2021). Digital Sustainability and Entrepreneurship: How Digital Innovations Are Helping Tackle Climate Change and Sustainable Development. *Entrepreneurship Theory and Practice*, 45(5), 999–1027. <https://doi.org/10.1177/1042258719899425>
- George, G., & Schillebeeckx, S. J. (2022). Digital transformation, sustainability, and purpose in the multinational enterprise. *Journal of World Business*, 57(3), 101326. <https://doi.org/10.1016/j.jwb.2022.101326>
- Grayson, D., & Hodges, A. (2017). Corporate Social Opportunity! In Routledge eBooks. <https://doi.org/10.4324/9781351280884>
- Harman, H. H. (1960). Modern factor analysis. Univ. of Chicago Press.
- Helfat, C. E., & Peteraf, M. A. (2009). Understanding dynamic capabilities: progress along a developmental path. *Strategic Organization*, 7(1), 91–102. <https://doi.org/10.1177/1476127008100133>
- Hitt, M. A., Ireland, R. D., Camp, S. M., & Sexton, D. L. (2001). Strategic entrepreneurship: entrepreneurial strategies for wealth creation. *Strategic Management Journal*, 22(6–7), 479–491. <https://doi.org/10.1002/smj.196>
- Ho, G. W., Lam, C. K. M., & Law, R. (2022). Conceptual framework of strategic leadership and organizational resilience for the hospitality and tourism industry for coping with environmental uncertainty. *Journal of Hospitality and Tourism Insights*. <https://doi.org/10.1108/jhti-09-2021-0242>
- Holzmann, P., & Gregori, P. (2023). The promise of digital technologies for sustainable entrepreneurship: A systematic literature review and research agenda. *International*

*Journal of Information Management*, 68, 102593.  
<https://doi.org/10.1016/j.ijinfomgt.2022.102593>

- Hristov, I., & Appolloni, A. (2021). Stakeholders' engagement in the business strategy as a key driver to increase companies' performance: Evidence from managerial and stakeholders' practices. *Business Strategy and the Environment*, 31(4), 1488–1503.  
<https://doi.org/10.1002/bse.2965>
- Instituto de estadística y cartografía de andalucía. (2019). Retrieved April 20, 2023, from [https://www.juntadeandalucia.es/institutodeestadisticaycartografia/badea/operaciones/consulta/anual/37128?CodOper=b3\\_1114&codConsulta=37128](https://www.juntadeandalucia.es/institutodeestadisticaycartografia/badea/operaciones/consulta/anual/37128?CodOper=b3_1114&codConsulta=37128)
- İyigün, N. Ö. (2015). What could Entrepreneurship do for Sustainable Development? A Corporate Social Responsibility-Based Approach. *Procedia - Social and Behavioral Sciences*, 195, 1226–1231. <https://doi.org/10.1016/j.sbspro.2015.06.253>
- Jalilvand, M. R., Pool, J. K., Jamkhaneh, H. B., & Tabaeian, R. A. (2018). Total quality management, corporate social responsibility and entrepreneurial orientation in the hotel industry. *Social Responsibility Journal*, 14(3), 601–618.  
<https://doi.org/10.1108/srj-04-2017-0068>
- Jansson, J., Nilsson, J., Modig, F., & Vall, G. H. (2017). Commitment to Sustainability in Small and Medium-Sized Enterprises: The Influence of Strategic Orientations and Management Values. *Business Strategy and the Environment*, 26(1), 69–83.  
<https://doi.org/10.1002/bse.1901>
- Jia, X., Chowdhury, M., Prayag, G., & Chowdhury, M. M. H. (2020). The role of social capital on proactive and reactive resilience of organizations post-disaster. *International Journal of Disaster Risk Reduction*, 48, 101614. <https://doi.org/10.1016/j.ijdrr.2020.101614>
- Karman, A., & Savanevičienė, A. (2021). Enhancing dynamic capabilities to improve sustainable competitiveness: insights from research on organisations of the Baltic region. *Baltic Journal of Management*, 16(2), 318–341.  
<https://doi.org/10.1108/bjm-08-2020-0287>
- Kim, K., Hornsby, J. S., Enriquez, J. L., Bae, Z., & Tarabishy, A. E. (2021). Humane Entrepreneurial Framework: A model for effective corporate entrepreneurship. *Journal of Small Business Management*, 59(3), 397–416.  
<https://doi.org/10.1080/00472778.2021.1896723>
- Kim, Y. H. (2021). Building organizational resilience through strategic internal communication and organization–employee relationships. *Journal of Applied Communication Research*, 49(5), 589–608. <https://doi.org/10.1080/00909882.2021.1910856>

- Knight, G. (1997). Cross-cultural reliability and validity of a scale to measure firm entrepreneurial orientation. *Journal of Business Venturing*, 12(3), 213–225. [https://doi.org/10.1016/s0883-9026\(96\)00065-1](https://doi.org/10.1016/s0883-9026(96)00065-1)
- Kraaijenbrink, J., Spender, J., & Groen, A. J. (2010). The Resource-Based View: A Review and Assessment of Its Critiques. *Journal of Management*, 36(1), 349–372. <https://doi.org/10.1177/0149206309350775>
- Kraus, S., Rehman, S. U., & García, F. J. S. (2020). Corporate social responsibility and environmental performance: The mediating role of environmental strategy and green innovation. *Technological Forecasting and Social Change*, 160, 120262. <https://doi.org/10.1016/j.techfore.2020.120262>
- Kreiser, P. M., Kuratko, D. F., Covin, J. G., Ireland, R. D., & Hornsby, J. S. (2021). Corporate entrepreneurship strategy: extending our knowledge boundaries through configuration theory. *Small Business Economics*, 56(2), 739–758. <https://doi.org/10.1007/s11187-019-00198-x>
- Kunkel, S., & Matthes, M. (2020). Digital transformation and environmental sustainability in industry: Putting expectations in Asian and African policies into perspective. *Environmental Science & Policy*, 112, 318–329. <https://doi.org/10.1016/j.envsci.2020.06.022>
- Lee, M., Yun, J. H., Pyka, A., Won, D. I., Kodama, F., Schiuma, G., Zhao, X. (2018). How to Respond to the Fourth Industrial Revolution, or the Second Information Technology Revolution? Dynamic New Combinations between Technology, Market, and Society through Open Innovation. *Journal of Open Innovation*, 4(3), 21. <https://doi.org/10.3390/joitmc4030021>
- Lengnick-Hall, C. A., Beck, T. E., & Lengnick-Hall, M. L. (2011). Developing a capacity for organizational resilience through strategic human resource management. *Human Resource Management Review*, 21(3), 243–255. <https://doi.org/10.1016/j.hrmr.2010.07.001>
- Lepoutre, J., & Heene, A. (2006). Investigating the Impact of Firm Size on Small Business Social Responsibility: A Critical Review. *Journal of Business Ethics*, 67(3), 257–273. <https://doi.org/10.1007/s10551-006-9183-5>
- Li, Y., Dai, J., & Cui, L. (2020). The impact of digital technologies on economic and environmental performance in the context of industry 4.0: A moderated mediation model. *International Journal of Production Economics*, 229, 107777. <https://doi.org/10.1016/j.ijpe.2020.107777>

- Linnenluecke, M. K., & Griffiths, A. D. (2010). Corporate sustainability and organizational culture. *Journal of World Business*, 45(4), 357–366. <https://doi.org/10.1016/j.jwb.2009.08.006>
- Liu, C., & Yang, J. (2021). How hotels adjust technology-based strategy to respond to COVID-19 and gain competitive productivity (CP): strategic management process and dynamic capabilities. *International Journal of Contemporary Hospitality Management*, 33(9), 2907–2931. <https://doi.org/10.1108/ijchm-10-2020-1143>
- Low, M. X., & Bu, M. (2021). Examining the impetus for internal CSR Practices with digitalization strategy in the service industry during COVID-19 pandemic. *Business Ethics, the Environment and Responsibility*, 31(1), 209–223. <https://doi.org/10.1111/beer.12408>
- Mackey, T. K., & Cuomo, R. E. (2020). An interdisciplinary review of digital technologies to facilitate anti-corruption, transparency and accountability in medicines procurement. *Global Health Action*, 13(sup1), 1695241. <https://doi.org/10.1080/16549716.2019.1695241>
- Manavalan, E., & Sultan, M. T. H. (2019). A review of Internet of Things (IoT) embedded sustainable supply chain for industry 4.0 requirements. *Computers & Industrial Engineering*, 127, 925–953. <https://doi.org/10.1016/j.cie.2018.11.030>
- Manetti, G., & Bellucci, M. (2016). The use of social media for engaging stakeholders in sustainability reporting. *Accounting, Auditing & Accountability*, 29(6), 985–1011. <https://doi.org/10.1108/aaaj-08-2014-1797>
- Marchese, M., Potter, J., Del Castillo, J., Chapple, K., Cumbers, A., Mitra, J., Wolfe, D. (2011). Entrepreneurship, SMEs and local development in andalusia, spain: A review by the local economic development and employment development (LEED) section of the organisation of economic co-operation and development, OECD. *LEED Working Paper Series, LEED Programme, OECD*. Retrieved from <https://www.oecd.org/regional/leed/46970408>
- Marshall, D., McCarthy, L., McGrath, P., & Claudy, M. (2015). Going above and beyond: how sustainability culture and entrepreneurial orientation drive social sustainability supply chain practice adoption. *Supply Chain Management*, 20(4), 434–454. <https://doi.org/10.1108/scm-08-2014-0267>
- Martín-Rojas, R., Garrido-Moreno, A., & García-Morales, V. J. (2023). Social media use, corporate entrepreneurship and organizational resilience: A recipe for SMEs success in

- a post-Covid scenario. *Technological Forecasting and Social Change*, 190, 122421. <https://doi.org/10.1016/j.techfore.2023.122421>
- Matten, D., & Moon, J. (2008). “Implicit” and “Explicit” CSR: A Conceptual Framework for a Comparative Understanding of Corporate Social Responsibility. *Academy of Management Review*, 33(2), 404–424. <https://doi.org/10.5465/amr.2008.31193458>
- Mattera, M., Ruiz-Morales, C., Gava, L., & Soto, F. G. (2021). Sustainable business models to create sustainable competitive advantages: strategic approach to overcoming COVID-19 crisis and improve financial performance. *Competitiveness Review*, 32(3), 455–474. <https://doi.org/10.1108/cr-03-2021-0035>
- McDougall, S. A., Rios, J. W., Apodaca, M. G., Park, G. I., Montejano, N. R., Taylor, J. A., Crawford, C. A. (2020). Effects of dopamine and serotonin synthesis inhibitors on the ketamine-, d-amphetamine-, and cocaine-induced locomotor activity of preweanling and adolescent rats: sex differences. *Behavioural Brain Research*, 379, 112302. <https://doi.org/10.1016/j.bbr.2019.112302>
- McQueen, A. (2007). Women and Social Innovation during the Second Empire: Empress Eugénie’s Patronage of the Fondation Eugène Napoléon. *Journal of the Society of Architectural Historians*. <https://doi.org/10.1525/jsah.2007.66.2.176>
- Miocevic, D., & Morgan, R. (2018). Operational capabilities and entrepreneurial opportunities in emerging market firms. *International Marketing Review*, 35(2), 320–341. <https://doi.org/10.1108/imr-12-2015-0270>
- Nambisan, S. (2017). Digital Entrepreneurship: Toward a Digital Technology Perspective of Entrepreneurship. *Entrepreneurship Theory and Practice*, 41(6), 1029–1055. <https://doi.org/10.1111/etap.12254>
- Nambisan, S., Wright, M., & Feldman, M. P. (2019). The digital transformation of innovation and entrepreneurship: Progress, challenges and key themes. *Research Policy*, 48(8), 103773. <https://doi.org/10.1016/j.respol.2019.03.018>
- Nandi, S., Thota, S., Nag, A., Divyasukhananda, S., Goswami, P., Aravindakshan, A., Mukherjee, B. (2016). Computing for rural empowerment: enabled by last-mile telecommunications. *IEEE Communications Magazine*, 54(6), 102–109. <https://doi.org/10.1109/mcom.2016.7498095>
- Nayal, P., Pandey, N., & Paul, J. (2021). Covid-19 pandemic and consumer-employee-organization wellbeing: A dynamic capability theory approach. *Journal of Consumer Affairs*, 56(1), 359–390. <https://doi.org/10.1111/joca.12399>

- Nguyen, H. P. T., Hoang, T. G., & Luu, H. N. (2019). Corporate social responsibility in Vietnam: opportunities and innovation experienced by multinational corporation subsidiaries. *Social Responsibility Journal*, 16(6), 771–792. <https://doi.org/10.1108/srj-02-2019-0082>
- Ortiz-De-Mandojana, N., & Bansal, P. (2016). The long-term benefits of organizational resilience through sustainable business practices. *Strategic Management Journal*, 37(8), 1615–1631. <https://doi.org/10.1002/smj.2410>
- Pavlou, P. A., & Sawy, O. a. E. (2011). Understanding the Elusive Black Box of Dynamic Capabilities. *Decision Sciences*, 42(1), 239–273. <https://doi.org/10.1111/j.1540-5915.2010.00287.x>
- Pfajfar, G., Shoham, A., Małecka, A., & Zalaznik, M. M. (2022). Value of corporate social responsibility for multiple stakeholders and social impact – Relationship marketing perspective. *Journal of Business Research*, 143, 46–61. <https://doi.org/10.1016/j.jbusres.2022.01.051>
- Podsakoff, P. M., MacKenzie, S. B., Lee, J., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879–903. <https://doi.org/10.1037/0021-9010.88.5.879>
- Puumalainen, K., Sjögrén, H., Soininen, J., Syrjä, P., & Kraus, S. (2023). Crisis response strategies and entrepreneurial orientation of SMEs: A configurational analysis on performance impacts. *International Entrepreneurship and Management Journal*. <https://doi.org/10.1007/s11365-023-00847-4>
- Qiu, L., Jie, X., Wang, Y., & Zhao, M. (2020). Green product innovation, green dynamic capability, and competitive advantage: Evidence from Chinese manufacturing enterprises. *Corporate Social Responsibility and Environmental Management*, 27(1), 146–165. <https://doi.org/10.1002/csr.1780>
- Rai, S. S., Rai, S., & Singh, N. K. (2021). Organizational resilience and social-economic sustainability: COVID-19 perspective. *Environment, Development and Sustainability*, 23(8), 12006–12023. <https://doi.org/10.1007/s10668-020-01154-6>
- Rauch, S., Jasny, E., Schmidt, K. L., & Petsch, B. (2018). New Vaccine Technologies to Combat Outbreak Situations. *Frontiers in Immunology*, 9. <https://doi.org/10.3389/fimmu.2018.01963>



- Roffia, P., & Dabić, M. (2023). The role of management control and integrated information systems for the resilience of SMEs. *Review of Managerial Science*. <https://doi.org/10.1007/s11846-023-00657-6>
- Ross, P. S., & Blumenstein, M. (2015). Cloud computing as a facilitator of SME entrepreneurship. *Technology Analysis & Strategic Management*, 27(1), 87–101. <https://doi.org/10.1080/09537325.2014.951621>
- Saberi, S., Kouhizadeh, M., Sarkis, J., & Shen, L. (2019a). Blockchain technology and its relationships to sustainable supply chain management. *International Journal of Production Research*, 57(7), 2117–2135. <https://doi.org/10.1080/00207543.2018.1533261>
- Saberi, S., Kouhizadeh, M., Sarkis, J., & Shen, L. (2019b). Blockchain technology and its relationships to sustainable supply chain management. *International Journal of Production Research*, 57(7), 2117–2135. <https://doi.org/10.1080/00207543.2018.1533261>
- Sajko, M., Boone, C., & Buyl, T. (2021). CEO Greed, Corporate Social Responsibility, and Organizational Resilience to Systemic Shocks. *Journal of Management*, 47(4), 957–992. <https://doi.org/10.1177/0149206320902528>
- Santa-Maria, T., Vermeulen, W. J., & Baumgartner, R. J. (2021). How do incumbent firms innovate their business models for the circular economy? Identifying micro-foundations of dynamic capabilities. *Business Strategy and the Environment*, 31(4), 1308–1333. <https://doi.org/10.1002/bse.2956>
- Schilke, O., Hu, S., & Helfat, C. E. (2018). Quo Vadis, Dynamic Capabilities? A Content-Analytic Review of the Current State of Knowledge and Recommendations for Future Research. *The Academy of Management Annals*, 12(1), 390–439. <https://doi.org/10.5465/annals.2016.0014>
- Settembre-Blundo, D., González-Sánchez, R., Medina-Salgado, S., & García-Muiña, F. E. (2021). Flexibility and Resilience in Corporate Decision Making: A New Sustainability-Based Risk Management System in Uncertain Times. *Global Journal of Flexible Systems Management*, 22(S2), 107–132. <https://doi.org/10.1007/s40171-021-00277-7>
- Shafique, I., Kalyar, M. N., & Mehwish, N. (2021). Organizational ambidexterity, green entrepreneurial orientation, and environmental performance in SMEs context: Examining the moderating role of perceived CSR. *Corporate Social Responsibility and Environmental Management*, 28(1), 446–456. <https://doi.org/10.1002/csr.2060>

- Shemi, A. P., & Procter, C. (2018). E-commerce and entrepreneurship in SMEs: case of myBot. *Journal of Small Business and Enterprise Development*, 25(3), 501–520. <https://doi.org/10.1108/jsbed-03-2017-0088>
- Shepherd, D. A., & Patzelt, H. (2011). The New Field of Sustainable Entrepreneurship: Studying Entrepreneurial Action Linking “What is to be Sustained” with “What is to be Developed.” *Entrepreneurship Theory and Practice*, 35(1), 137–163. <https://doi.org/10.1111/j.1540-6520.2010.00426.x>
- Si, S., Hall, J., Suddaby, R., Ahlstrom, D., & Wei, J. (2022). Technology, entrepreneurship, innovation and social change in digital economics. *Technovation*, 119, 102484. <https://doi.org/10.1016/j.technovation.2022.102484>
- Singh, S., Del Giudice, M., Jabbour, C. J. C., Latan, H., & Sohal, A. S. (2021). Stakeholder pressure, green innovation, and performance in small and medium-sized enterprises: The role of green dynamic capabilities. *Business Strategy and the Environment*, 31(1), 500–514. <https://doi.org/10.1002/bse.2906>
- Sjödin, D. R., Parida, V., Kohtamäki, M., & Wincent, J. (2020). An agile co-creation process for digital servitization: A micro-service innovation approach. *Journal of Business Research*, 112, 478–491. <https://doi.org/10.1016/j.jbusres.2020.01.009>
- Sodhi, M. S., & Tang, C. S. (2019). Research Opportunities in Supply Chain Transparency. *Production and Operations Management*, 28(12), 2946–2959. <https://doi.org/10.1111/poms.13115>
- Srinivasan, A., & Venkatraman, N. (2018). Entrepreneurship in digital platforms: A network-centric view. *Strategic Entrepreneurship Journal*, 12(1), 54–71. <https://doi.org/10.1002/sej.1272>
- Sturm, S., Hohenstein, N., & Hartmann, E. (2023). Linking entrepreneurial orientation and supply chain resilience to strengthen business performance: an empirical analysis. *International Journal of Operations & Production Management*. <https://doi.org/10.1108/ijopm-07-2022-0418>
- Tang, Z., & Tang, J. (2018). Stakeholder Corporate Social Responsibility Orientation Congruence, Entrepreneurial Orientation and Environmental Performance of Chinese Small and Medium-sized Enterprises. *British Journal of Management*, 29(4), 634–651. <https://doi.org/10.1111/1467-8551.12255>
- Teece, D. J. (2007). Explicating dynamic capabilities: the nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal*, 28(13), 1319–1350. <https://doi.org/10.1002/smj.640>

- Teece, D. J. (2014). A dynamic capabilities-based entrepreneurial theory of the multinational enterprise. *Journal of International Business Studies*, 45(1), 8–37. <https://doi.org/10.1057/jibs.2013.54>
- Teece, D. J. (2017). Dynamic Capabilities and (Digital) Platform Lifecycles. *Advances in Strategic Management*, 211–225. <https://doi.org/10.1108/s0742-332220170000037008>
- Teece, D. J. (2018). Profiting from innovation in the digital economy: Enabling technologies, standards, and licensing models in the wireless world. *Research Policy*, 47(8), 1367–1387. <https://doi.org/10.1016/j.respol.2017.01.015>
- Teece, D. J., Pisano, G. P., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509–533. [https://doi.org/10.1002/\(sici\)1097-0266\(199708\)18:7](https://doi.org/10.1002/(sici)1097-0266(199708)18:7)
- Torugsa, N., O'Donohue, W., & Hecker, R. (2013). Proactive CSR: An Empirical Analysis of the Role of its Economic, Social and Environmental Dimensions on the Association between Capabilities and Performance. *Journal of Business Ethics*, 115(2), 383–402. <https://doi.org/10.1007/s10551-012-1405-4>
- Troise, C., & Camilleri, M. A. (2021). The Use of Digital Media for Marketing, CSR Communication and Stakeholder Engagement. *Emerald Publishing Limited eBooks*, 161–174. <https://doi.org/10.1108/978-1-80071-264-520211010>
- Upadhyay, A., Mukhuty, S., Kumar, V., & Kazancoglu, Y. (2021). Blockchain technology and the circular economy: Implications for sustainability and social responsibility. *Journal of Cleaner Production*, 293, 126130. <https://doi.org/10.1016/j.jclepro.2021.126130>
- Valdez-Juárez, L. E., Vázquez, D. G., & Ramos-Escobar, E. A. (2021). Entrepreneurial orientation and CSR: a dynamic capability in the corporate performance of Mexican SMEs. *Entrepreneurship and Sustainability Issues*, 8(3), 654–680. <https://doi.org/10.9770/jesi.2021.8.3>
- Von Struensee, S. (2021). Artificial Intelligence and Corporate Social Responsibility: Employees' Key Role in Driving Responsible Artificial Intelligence at Big Tech. *Social Science Research Network*. <https://doi.org/10.2139/ssrn.3873097>
- Wade, M. J., & Hulland, J. (2004). Review: The Resource-Based View and Information Systems Research: Review, Extension, and Suggestions for Future Research. *Management Information Systems Quarterly*, 28(1), 107. <https://doi.org/10.2307/25148626>

- Wang, W. Y., & Wang, Y. (2020). Analytics in the era of big data: The digital transformations and value creation in industrial marketing. *Industrial Marketing Management*, 86, 12–15. <https://doi.org/10.1016/j.indmarman.2020.01.005>
- Wei, L., & Kim, N. (2021). Attenuating public skepticism: Effects of pre-crisis corporate engagement and post-crisis CSR initiatives on corporate evaluations. *Public Relations Review*, 47(1), 101999. <https://doi.org/10.1016/j.pubrev.2020.101999>
- Wiklund, J., & Shepherd, D. A. (2005). Entrepreneurial orientation and small business performance: a configurational approach. *Journal of Business Venturing*, 20(1), 71–91. <https://doi.org/10.1016/j.jbusvent.2004.01.001>
- Wilson, M. W. (2012). Location-based services, conspicuous mobility, and the location-aware future. *Geoforum*, 43(6), 1266–1275. <https://doi.org/10.1016/j.geoforum.2012.03.014>
- Winter, S. G. (2003). Understanding dynamic capabilities. *Strategic Management Journal*, 24(10), 991–995. <https://doi.org/10.1002/smj.318>
- Xiaotian, Y., Wang, L., Zhu, F., & Müller, R. (2021). Prior and governed stakeholder relationships: The key to resilience of inter-organizational projects. *International Journal of Project Management*, 40(1), 64–75. <https://doi.org/10.1016/j.ijproman.2021.10.001>
- Yuan, R., Luo, J., Liu, M. D., & Yu, J. (2022). Understanding organizational resilience in a platform-based sharing business: The role of absorptive capacity. *Journal of Business Research*, 141, 85–99. <https://doi.org/10.1016/j.jbusres.2021.11.012>
- Zahra, S. A. (1993). Environment, corporate entrepreneurship, and financial performance: A taxonomic approach. *Journal of Business Venturing*, 8(4), 319–340. [https://doi.org/10.1016/0883-9026\(93\)90003-n](https://doi.org/10.1016/0883-9026(93)90003-n)
- Zhang, F., Zhang, H., & Gupta, S. (2022). Investor participation in reward-based crowdfunding: impacts of entrepreneur efforts, platform characteristics, and perceived value. *Information Technology & Management*, 24(1), 19–36. <https://doi.org/10.1007/s10799-022-00363-x>

# *Capítulo 5*

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## **5. HOW HR PRACTICES ENHANCE ORGANISATIONAL RESILIENCE**

### **5.1. ABSTRACT**

Amidst uncertain conditions, maintaining organisational resilience (OR) is imperative, particularly for small and medium-sized enterprises (SMEs) confronted with crises and challenges in the contemporary digital landscape. We investigate the ways in which human resource practices (HRP) such as job analysis, training and development, compensation, and staffing contribute to reinforcing organisational resilience within the SME sector. Employing the resource-based view theory, we aim to unveil the underlying mechanisms linking HR practices to organisational resilience. This collaborative dynamic is empirically assessed through a survey involving 124 Palestinian SMEs.

The theoretical and practical implications underscore the strategic utilisation of these HR practices by SMEs to fortify resilience. Ultimately, our study provides practical guidelines for policymakers and business leaders to foster sustainability and resilience. A methodical and strategic approach to job analysis and training, grounded in an understanding of employee needs and aligned with the company's strategy, results in heightened resilience. Simultaneously, a well-timed recruitment process, tailored to the company's requirements, facilitates the establishment of a responsive and prepared workforce. The contribution of our paper lies in advancing knowledge by synthesising these practices in the context of resilience development.

**Keywords:** Job analysis, Recruitment, Compensations, Training and Organisational resilience.

### **5.2. INTRODUCTION**

The business world is facing increasing pressure from the external environment, and it has become necessary to cope with an environment of ambiguity and uncertainty (Giachetti et al., 2018). With high competition, globalisation and rapid changes in technology, resilience has drawn increased attention from researchers and practitioners due to the awareness of the repercussions of adversity and the consequences of crises (Tukamuhabwa et al., 2015).

In this sense, organisational resilience refers to the ability of organisations to recover, manage, adapt, and absorb change (Vogus & Sutcliffe, 2007). It can be developed through various organisational resources, such as structure, practices, perception, and behaviour (Lengnick-Hall

et al., 2011). Accordingly, Human Resources (HR) practices can enhance organisational resilience by enabling employees to deal with unexpected events, develop rapid responses, and adapt to changes (Liu et al., 2019). They also consolidate the firm's competitive advantage (Bouaziz & Smaoui Hachicha, 2018; de Moura & Amelia Tomei, 2021; Hamouche, 2021).

Organisational resilience can be developed in three dimensions as cognitive, behavioural and contextual capabilities at the level of the organisation and the HR system (Lengnick-Hall et al., 2011). The cognitive dimension relates to the capacity of employees and organisations to give meaning to new situations, by understanding the changes taking place and the organisation's behaviour, through fostering a sense of core values and goals, and “constructive thinking”. The behavioural dimension concerns the development of organisations' learning and investigative skills. As well, agility helps to develop new skills, seize opportunities and capitalise on changes, whether in technology or the marketplace. The contextual dimension emphasises benefiting from relationships both within and outside the organisation. This facilitates the development of effective responses to environmental complexities, raising a sense of security within the organisation and promoting shared responsibility. In addition, it leads to benefits from external resources and relationships with suppliers and allies (Lengnick-Hall et al., 2011).

Several studies theoretically and empirically studied the link between HRP and organisational resilience (Ho et al., 2014; De Moura & Amelia Tomei, 2021; Hamouche, 2021;), where the resilience of organisations is built by influencing individual attitudes and behaviours. These practices have an important role in raising the required capacity for organisations to be resilient (Ho et al., 2014). For example, Kai-Ming Au et al. (2008) found a positive relationship between training, human capital development and organisational resilience that is activated by adaptability. Also, Vardarlier (2016) found a significant relationship between talent management and an organisation's ability to monitor risks and respond to crises.

Based on a literature review, The strategic data analysis approach plays the role of providing data and information for human resources practitioners to make decisions (Lengnick-Hall et al., 2011; Bouaziz & Smaoui Hachicha, 2018; Liu et al., 2019; Rehman et al., 2021). It depends on studying the situation of the organisation and the Knowledge, skills, abilities and other characteristics (KSAOs), required in the organisation. It also enables them to identify the talents required to fill job vacancies to achieve the objectives of the organisation. This process selects the technology and sources to identify candidates and how to reach them.

The organisation ensures the continuity of its work despite the disruptions and also ensures that the right skilled staff is obtained at the right time. This helps to reduce the limitation or prevention of external influences on the organisation. In addition to developing training programs, the KSAOs identify which employees need to perform their tasks and maintain their productivity. While the compensation is based on making decisions based on available employee data, company culture, company's financial position, internal policy. It also determines the contributions of employees. Thus, this practice ensures the continuity of their productivity and reduces the impact of the repercussions of crises on employees (Gomez-Mejia and Balkin, 1989).

This paper addresses this gap in the literature by empirically investigating how HRP affects organisational resilience. The overarching aim is to scrutinise the relationship between HRP and organisational resilience across cognitive, contextual, and behavioural dimensions. The focus on job analysis, recruitment and selection, training and development, and compensation in our study is integral to elevating the resilient capacities of employees and aligning their behaviour with the organisation's strategy. The subsequent analysis will delve into the specific characteristics of these practices that are instrumental in bolstering resilience, offering nuanced insights into their cognitive, contextual, and behavioural dimensions (Lengnick-Hall et al., 2011).

Our empirical investigation unfolds within the unique context of SMEs in Palestine, providing a localised lens that enriches the study's applicability. The article's structure unfolds systematically, commencing with a conceptual model outlining our research hypotheses. Subsequently, we present the methodology, analyse the data, and delve into a comprehensive discussion of results. The concluding observations encapsulate key insights, paving the way for future research endeavours in this critical intersection of HRP and organisational resilience.

### **5.3. CONCEPTUAL MODEL**

Several researchers have emphasised the importance of human resource practises in improving organisational performance and productivity (Okoye & Ezejiofor, 2013). Because of their role in increasing competitive advantage and performance in business operations, human resources are regarded as one of the most important intangible assets of organisations (Shahzad et al., 2016).



Human resources are defined as the set of skills and activities related to employee performance that help the company achieve its goals, HRP including recruitment, training, job analysis, and compensation (Rahman et al., 2013). These practices help with the growth of employees' capabilities, knowledge, and skills, as well as their job satisfaction, which all contribute to the achievement of individual and organisational goals and the addition of value to the organisation (Minbaeva, 2005).

Human resource management can be linked to business strategies to ensure that organisations have the skilled, engaged, committed, and motivated employees needed to maintain a sustainable competitive advantage (Armstrong & Taylor, 2020). In addition to relying on human resource analytics, which is based on gathering and analysing data related to human resource management practises in order to generate results that can be used to assist the organisation in developing new solutions to its problems.

This increases organisational resilience, which refers to a company's ability to deal with unexpected disruptions as well as internal and external crises (Annarelli & Nonino, 2016).

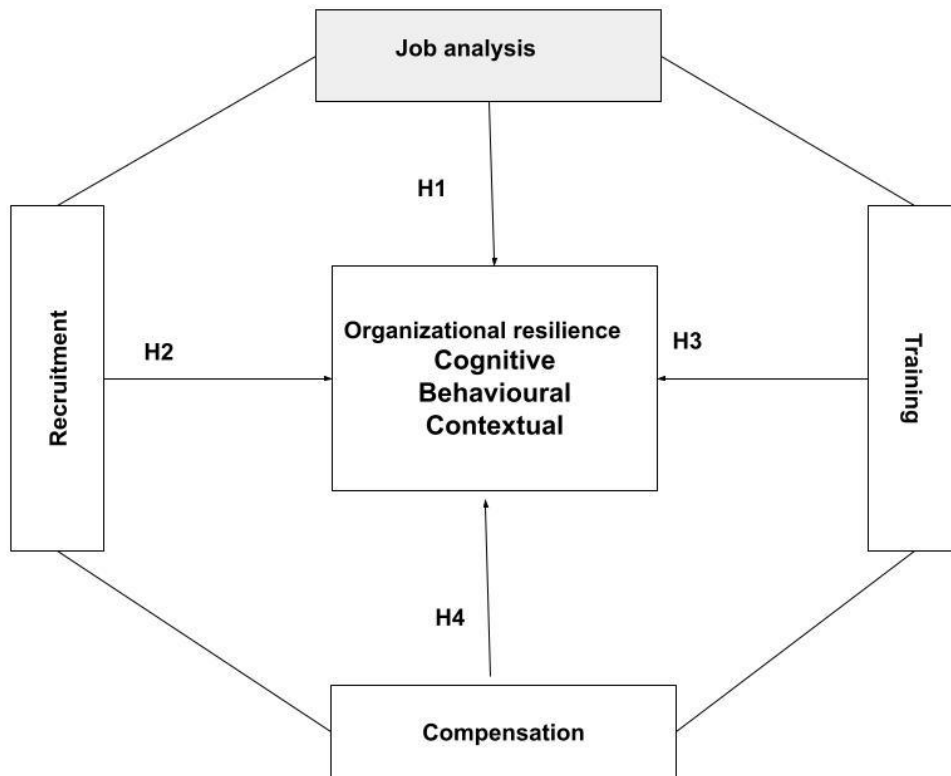
It also refers to a company's ability to respond to all situations and engage in transformative actions in order to capitalise on disruptive situations that may threaten the organisation's survival, which can be developed through a variety of organisational resources such as structure, practises, perception, and behaviour (Lengnick-Hall et al., 2011).

Weick (1993) proposed that problem-solving abilities and communication behaviours (such as seeking and exchanging new information) are sources of resilience for organisational members who must understand and respond to a crisis in their organisation.

In this regard, resilient employees can foster organisational resilience by demonstrating not only their ability to recover from adversity, but also their ability to use and develop personal resources and work environments proactively (King et al., 2015). They exhibit continuous adaptation through the use of psychological resources, as well as the development and activation of resilient behaviours.

Figure 1 shows the model examined in this study. It consists of the human resource practises that we tested (Job Analysis, Recruitment and Selection, Training and Compensation), which are independent variables. In addition we relied on the trends of organisational resilience (cognitive, behavioural and contextual), identified by Lengnick-Hall et al. (2011).

**Figure 1 A conceptual model, HRP and Organisational resilience**



## **5.4. RESEARCH HYPOTHESES**

### **5.4.1. Job Analysis and organisational resilience**

Job analysis is the basis for other HR activities (Siddique, 2004). Companies that conduct regular job analyses are much more aware of their strengths and weaknesses and can take corrective actions to improve deficiencies in their skills and work behaviour on a timely basis (Singh, 2008). Job analysis, according to Armstrong and Taylor (2020), is the process of determining the duties, responsibilities, and skills needed to create a job description that identifies what needs to be done as well as the specifications of the person who will fill that position.

Job analysis is an important factor in all HR practices because it defines the knowledge, skills, and abilities (KSAs) that an employee is required to accomplish their job. Furthermore, the employee's detailed responsibilities. The primary goal of workplace analytics is to increase employee usage and performance. Also, to plan new jobs and make changes in order to achieve

and maintain organisational goals. One of the outcomes of the job analysis is the performance appraisal, which motivates employees to do their best.

KSAs are becoming less stable as a result of rapid changes in the work environment, technology, and jobs. This enhances opportunities for ongoing learning, identifying and emphasising strengths, and addressing weaknesses. Furthermore, proactive job analysis assists in identifying tasks and their assigned time, as well as meeting organisational needs in turbulent environments (Siddique, 2004).

Companies that want to survive in a competitive environment and deal with changes in the nature of work, such as reduced specialisation and rotation or joint work assignments, must conduct a strategic job analysis (Singh, 2008).

Because traditional job analysis is focused on describing job occupant behaviour and gathering data on how the job and current tasks are carried out, it tends to match individuals with well-defined jobs using traditional job analysis and ignores the company's strategy. In order to implement the plans resulting from the job analysis process, organisations must link job analysis with their business strategy (Sanchez & Levine, 2009).

Organisations should therefore emphasise competencies such as interpersonal skills, conflict resolution skills, innovative thinking, resilience, decision-making ability, and self-motivation. This contributes to creating responses to new challenges, as it gives employees the space to make decisions that they see fit for those unexpected situations. Job analysis is crucial to the process of planning and making appropriate decisions (McEntire et al., 2006).

This process enables managers to fully comprehend the functions of the organisation, resulting in more efficient decisions. Furthermore, based on this analysis, employees will have the freedom to share knowledge and form joint work opportunities between departments, because relying on the traditional aspect will provide a job description and determine the basic tasks of the job, and by adding Competency-based aspect, employees will have the freedom to share knowledge and form joint work opportunities between departments (Siddique, 2004).

The competency-focused approach emphasises employee motivation, adaptability, teamwork orientation, and other similar characteristics that are required for successful job performance. To collect such information, most organisations have some variation of the critical incident approach. In contrast to standard methods, which typically attempt to obtain standardised information across different job groups through a combination of interviews and

transmitted or self-managed checklists, the critical incident approach generates relevant data by observing jobholders' tasks and behaviours in critical situations (Anthony et al., 2002).

Employers should emphasise the ability to deal with work pressure, sustainability, resilience, teamwork, problem-solving, and the ability to learn and innovate (Iles, 1997). Thus, organisations will ensure their employees' ability to adapt and deal with various changes, thereby increasing the organisation's resilience (Singh, 2008). Based on the foregoing, job analysis contributes to enhancing organisational resilience as it serves as a roadmap that contributes to identifying the required skills, and also enables the organisation to expand job descriptions, leading to a variety of employment sources, which contributes to team efficiency and knowledge expansion (Lengnick-Hall et al., 2011). Moreover, proactive analysis helps in problem-solving and developing unconventional and creative solutions to anticipated challenges (Siddique, 2004).

It enhances resilience in its cognitive dimension, because cognitive resources indicate a sense of purpose, basic values, real vision, and intentional use of language. In addition, she has sufficient skills, knowledge and competence within her team, or easy access to the knowledge of experienced experts or mentors to discuss important issues (Vogus & Sutcliffe, 2007). Thus, it will have the ability to perceive changes and deal with challenges (Ma et al., 2018; Ruiz-Martin et al., 2018).

Whereas, relying on traditional job analysis, a comprehensive view of the nature of the job is provided and (KSAOs) a competency approach job analysis, focusing on motivation and dealing with changes and adaptation to Siddique (2004). Thus the job description will be expanded to include these skills, abilities, information, and also consideration of employee suggestions. This will contribute to support resilience in the behavioural dimension related to knowledge, experience and implementation, and thus take the necessary actions to move the organisation forward (Lengnick-Hall & Beck, 2005). Furthermore, the competency-based approach supports employee learning by integrating the organisation's strategic goals with daily behaviours (Sanchez & Levine, 2009).

Behavioural resilience is about finding and applying new job routines and habits, to deal with all scenarios, and will prompt employees to search for different resources and open new channels of communication to deal with changes (Ruiz-Martin et al., 2018).

In strategic job analysis, employees are encouraged to contact the work team to complete tasks and also identify relationships and external sources that can be used to complete tasks (Singh, 2008; Ma et al., 2018). Thus, it contributes to enhancing contextual resilience, because it is a set of contacts and resources that are used to deal with uncertain situations. Deep social capital, a broad resource network and a respect for expertise are key elements of contextual resilience.

*Hypothesis 1: Proactive and strategic Job analysis is positively related to organisational resilience*

#### **5.4.2. Recruitment influence on Organisational resilience**

One of the key functions of human resources is recruitment and selection. Recruitment involves attracting qualified candidates to open positions that the company needs filled, and selection involves using techniques and instruments to choose the best candidates (Ofori & Aryeetey, 2011).

Where recruitment and selection serve as the organisation's entry point for new employees (Mudashiru et al., 2013). The organisation uses a variety of recruitment methods, including advertising, recruitment agencies, company websites, and social media, and then uses tests, interviews, and other methods to select the best candidate (Williams et al., 2021).

From a resource-based viewpoint (RBV), organisations gain knowledge about their resources and development plans, giving them a competitive advantage. This is accomplished through the use of appropriate recruitment methods and the company's recruitment and selection strategy, as well as on-the-job training, and the company's resources. These methods were chosen based on their validity, impartiality, scope of application, and cost (Lane et al., 2015).

The systematic recruitment process is concerned with gathering accurate information about candidates, such as qualifications, skills, and abilities, evaluating them, and then making employment decisions. This is because employees with social skills, abilities, and experience help the organisation gain a competitive advantage and thus contribute to its overall success (Armstrong & Taylor, 2020).

It has also been argued that proper hiring is critical for an organisation to build and maintain a competitive advantage (Luthans & Youssef, 2004). Thus, recruitment and selection

have become essential in organisations because people must be attracted at the right time, in sufficient numbers, and with the appropriate qualifications.

That is, the right people must be hired to ensure organisational success (Abbasi & Hollman, 2000). Recruitment and selection are critical components of an organisation's overall resource strategies, as they identify and secure the people required for the organisation to survive and succeed in the short to medium term, internal or external resources (Moser, 2005).

The approach used by the organisation in employee recruitment and selection determines organisational performance. Holm, (2012) discussed a comprehensive model of recruitment, emphasising the importance of the entire recruitment process and the interdependence of its parts, and looking for ways to reduce time and effort in the recruitment and selection process.

The effective recruitment strategies can result in positive organisational outcomes. Adopting a qualitative system of recruitment and selection has helped organisations grow by allowing them to fill vacancies with the right people. Furthermore, appropriate channels have assisted organisations in obtaining the various and diverse sources to which they can turn for effective recruitment.

The general goal of recruitment and selection in SMEs is to obtain the number and quality of employees needed to meet the organisation's strategic objectives at the lowest possible cost (Ofori & Aryeetey, 2011). Furthermore, there is a significant and positive relationship between recruitment, selection, and company performance. (Abbasi et al., 2020) discovered a link between recruitment, selection, and business performance (Katou & Budhwar, 2006).

Implementing an effective recruitment process is linked to enhanced organisational performance and labour productivity (Ayanda & Danlami S., 2011). Besides that, there is a link between the breadth of hiring, the validity of the selection test, the use of formal selection procedures, and firm profits (Terpstra & Rozell, 2006). Moreover, it has been emphasised that recruitment strategies that provide numerous qualified candidates along with a reliable and up-to-date selection system will have a significant impact on the standard quality and capabilities of new hires (Inkinen, 2016).

This trend can be supported by technological progress. It relies on electronic interactions, such as intranets, the World Wide Web, and software packages that improve human resource processes (Stone & Dulebohn, 2013). The ongoing effort to make recruitment faster and more

user-friendly has fuelled the widespread use of computer technology. Many large public organisations use computer and email bulletin boards to advertise job opportunities.

Adopting recruitment practices to select candidates with a high degree of resilience is vital. Recruiting employees from highly resilient organisations and then training those employees to maintain resilience is one of the most successful strategies for enhancing organisational resilience (Lengnick-Hall et al., 2011).

A workforce that possesses resilience plays a crucial role in enhancing both the overall organisational performance and resilience (Lengnick-Hall et al., 2011; Davidescu et al., 2020). Likewise, effective recruitment and selection practices positively impact the contextual performance of employees, emphasising how the sources of recruitment and the personnel selection process actively contribute to organisational resilience.

*Hypothesis 2: Board recruitment sources is positively related to organisational resilience*

#### **5.4.3. Training influence and organisational resilience**

Training is considered to be the most important function of human resource management. It is a continuous process aimed at improving employee performance through the systematic development of knowledge, skills, and abilities by providing them with new information to perform their jobs efficiently (Vathanophas, 2006). Training is defined as "the systematic acquisition of skills, rules, concepts, or attitudes that lead to improved performance" by Goldstein (1986).

When training is extended to either current or newly on boarded employees to proficiently fulfil their responsibilities (Acton & Golden, 2003), it becomes imperative for a company to cultivate a proficient and adequately equipped workforce. This approach aims to enhance performance efficiency in routine tasks and foster adaptive behaviours, ensuring competitiveness in a dynamic environment. Achieving this involves providing support and disseminating new information to augment capacity and facilitate skill development (Falola et al., 2018).

Employee training programmes are developed based on employees' orientation, managerial skills, and operational skills. Thus, the primary goals of many employee development programmes are to advance the organisation's mission and to assist workers in learning the organisation's culture.

Organisations depend on information technology systems not only for administering employee training programs but also for analysing, designing, and evaluating these programs. It is crucial to maintain alignment between the knowledge, skills, and abilities of employees and the job requirements, ensuring their competence. Consequently, organisations must timely provide the requisite information and skills to employees, allowing them the flexibility to learn at their convenience. Organisations use a long-term strategic approach to achieve their goals, linking training programmes to the organisation's strategies (Salas et al., 2012). As a result, trainees have the ability and motivation (via compensation) to learn, retain, and apply new skills. Adapting to new circumstances and instituting a new routine (Awais Bhatti et al., 2014).

From a resource-based view, training is viewed as an investment in human resources because it provides employees with knowledge and skills while also increasing their adaptability. As a result, employees are regarded as a competitive advantage, allowing the company to achieve positive results (Bromiley & Rau, 2015). Thus, human capital is an important base upon which organisations can build resilience. By fostering skills in its employees that, when aggregated at the organisational level, improve responsiveness (Jia Wang et al., 2009). Training is a critical component of organisational resilience and its various types contribute to organisational resilience (Crichton et al., 2009).

There's a significant correlation between talent management and an organisation's ability to monitor risks and respond to crises (Ngoc Su et al., 2021). Furthermore, Vardaler (2016) found a positive link between training, human capital development, and organisational resilience, which is activated by resilience and adaptability.

Based on the above, training should include a variety of criteria to improve organisational resilience and job performance. A proactive approach to training, moving from individual job skills to understanding workplace skills, leadership development, creative thinking, and problem solving (Bertolino et al., 2011). Thus, it enhances resilience in its cognitive and behavioural dimensions, because cognitive refers to awareness and critical thinking, and thus employees will be able to understand the current situation and deal with conditions of uncertainty.

The behavioural capabilities of employees that are built on the basis of these skills will generate behaviour to access alternatives and respond to crises (Fiol & Lyles, 1985). In addition to developing training programs with the participation of both managers and employees, so that



training programs meet employee perceptions, which will serve as an incentive to participate in training programs.

This will enhance resilience in its contextual dimension as well, as it will enhance information sharing among employees and achieve cooperation among employees in addition to expanding the decision-making process (Lengnick-Hall and Beck 2009).

*Hypothesis 3: Training based on employee needs assessment is positively related to organisational resilience*

#### **5.4.4. Compensation influence on organisational resilience**

Compensation is one of the important human resources practises, and it is one of the social means, and it relates to everything that employees receive in return for their work, whether financial or non-financial incentives. Whereas, compensation is one of the mechanisms that affects employee behaviour and productivity, and thus organisational performance (Kehoe & Wright, 2010; Torre et al., 2014). This is because they get it in return for their performance and contribution to the company, also explained Remuneration as remuneration and can be defined as any form of remuneration given to employees for the contributions they make to the organisation. In general, the purpose of compensation management is to help companies achieve strategic goals.

This is because rewards and compensation contribute to reducing turnover rates. According to Lau & Sholihin (2005), compensation is divided into two types: (1) financial compensation and (2) non-financial compensation. Direct compensation includes (a) base salary, (b) merit pay, incentive pay, bonuses, commissions, profit sharing, profit sharing, share distribution, and (c) pay differential, which includes savings and stock purchase bonus programmes.

The compensation system significantly increases job satisfaction while decreasing turnover intention (Van Herpen et al., 2005). Employee perceptions of the compensation system in their organisations, in particular, can influence task-related roles, satisfaction levels, and morale (Lee et al., 2015). According to research, providing adequate and appropriate incentives to the workforce is required to maximise its full potential toward improved individual and organisational performance (Raziq & Maulabakhsh, 2015).

For the company's success and to ensure internal and external justice . External justice ensures that jobs are fairly compensated in the labour market based on comparable work. Internal justice ensures that the company's demand for higher-level positions and more qualified employees is met with higher pay (Carpenter & Sanders, 2002).

Compensation includes monetary, non-monetary, direct and indirect compensation that an organisation exchanges for its employees' participation; both job performance and personal contribution. Remuneration is the most important component of an employment contract because it is the primary reason people work (Brown et al., 2000). Compensation management is one of the cornerstones of Human Resource Management (HRM). It is concerned with the development and implementation of strategies and policies aimed at compensating people practically, justifiably, and always in proportion to their contribution to the organisation (Epstein, 2000). Compensation management, as indicated by its name, encompasses the structure in which the highest-performing employee receives more rewards than an average performer (Durham & Bartol, 2015). This approach serves to incentivize top performers, encouraging diligence and fostering a competitive environment within the organisation. Scholars propose that compensation management is integral to the (HRM) approach in attaining organisational goals and effectively managing personnel. Its strategic importance lies in its capability to address critical issues within the organisational framework (Gupta & Shaw, 2014).

Compensation has a positive and significant impact on employee performance, according to (Pangastuti & Efendi, 2020). Compensation has a positive and significant impact on employee performance. Compensation also contributes to enhancing employees' sense of job security, identifying job security which is an essential component in achieving employee commitment and enhancing performance (Noble, 2008)

This is because they feel that they are an important part of the organisation, and there is a relationship between compensation and employee empowerment. When employees feel valued, it will enhance resilience, productivity, adaptability to changes and uncertainty and this will generally affect the performance and resilience of the organisation ( Bouaziz & Smaoui Hachicha, 2018).

*Hypothesis 4: Compensation system that empowers employees and ensures job security is positively related to organisational resilience.*

## **5.5. METHODOLOGY**

### **5.5.1. Sample**

The information was gathered through a survey distributed to Palestinian small and medium-sized businesses in various sectors.

This questionnaire aims to collect information about these companies' human resource practices and whether they are used to improve their resilience. The survey yielded 124 questionnaires out of 500 distributed, with a response rate of 24.8%.

Respondents in our sample included managers (55%), midfield managers (34%), high line managers (17%), and employees (23%). Furthermore, the number of people with higher degrees was (65%), and the level of education was intermediate (55%), while only those with basic training were (4%).

A report summarising the study's findings was presented to increase response rates. To reduce potential desirability bias, we kept all individual responses strictly confidential and provided information in aggregate form. We looked over the data to see if there were any issues with non-response bias or differences between early and late responders. To examine the possibility of non-response bias. We discovered no statistically significant differences between early and late responders, nor evidence of a systematic difference (Filion, 1975).

### **5.5.2 Measurement of variables**

### **5.5.3. Organisational resilience:**

Based on the literature reviews, we relied on devising the (Lengnick-Hall et al., 2011) Scale, which identified three dimensions of organisational resilience: cognitive, behavioural and contextual. We designed a nine item scale (1 “Totally disagree,” 7 “Totally agree”) to measure the construct. We performed CFA to validate the scale ( $\chi^2_2 = 6,696$ , NFI = .99, NNFI = .98, GFI = .99, CFI = .98, IFI = .99). Which demonstrated its one-dimensionality, validity, and reliability ( $\alpha = .98$ ).

### **5.5.4. Job analysis**

There are several measures of job analysis, but in this study we only wanted to determine the type of analysis that companies use, so we built a scale of seven items (Singh, 2008). We used a seven-point Likert scale (1 “totally disagree”, 7 “totally agree”).

We develop a confirmatory factor analysis to validate the scales ( $\chi^2_6 = 15,237$ , NFI = .99, NNFI = .99, GFI = .99, CFI = .99, IFI = .99) and show that the scale is unidimensional and has adequate validity and reliability ( $\alpha = .93$ ).

#### **5.5.5. Recruitment**

This study used a seven-point Likert scale (1 “totally disagree”, 7 “totally agree”) of five items developed by (Ahmad & Schroeder, 2002) to measure recruitment. These items were adapted to the present study. We performed CFA to validate the scale ( $\chi^2_3 = 21,292$ , NFI = 0.99, NNFI = 0.97, GFI = 0.98, CFI = 0.97), which demonstrated its one-dimensionality, validity, and reliability ( $\alpha = .915$ ).

#### **5.5.6. Training**

We used seven items developed by (van Eerde et al 2008) which were first adapted by (Ford and Noe’s 1987 ; m Morgan and Casper’s 2000) these items have been duly adapted to the present study. A seven-point Likert scale(1 “totally disagree”, 7 “totally agree”) to measure digital transformation. CFA ( $\chi^2_2 = 14,741$ , NFI = 0.97, NNFI = 0.97, GFI = 0.98, CFI = 0.98) showed that the scale was one-dimensional and had validity and reliability ( $\alpha = .906$ ).

#### **5.5.7. Compensation**

The study uses a scale of 5 items (1 “totally disagree”, 7 “totally agree”), developed by (Balkin & Gomez-Mejia, 1990). These items are duly adapted to the present study. We develop a confirmatory factor analysis to validate the scales ( $\chi^2_{11} = 3,090$ , NFI = .99, NNFI = .99, GFI = .99, CFI = .99, IFI = .99) and show that the scale is unidimensional and has adequate validity and reliability ( $\alpha = .930$ ).

#### **5.5.8. Control variables**

After reviewing the HR literature, these Dummy variables were chosen (Lewis, 1986; Huselid, 1995) to control for the influence of external factors, like gender, age, job position, and years of experience.

### **5.6. ANALYSIS AND RESULTS**

Table 1 shows the descriptive statistics and correlation matrix for the studied variables. There was a positive and significant correlation between human resource practices and organisational resilience. The HR practices studied also showed similar and strong correlations.

These correlations confirm previous studies, which confirm the role of human resources in enhancing resilience and dealing with an environment of uncertainty. (Ngoc Su et al., 2021).

**Table 1: Means, standard deviations and correlations.**

Descriptive Statistics											
			Age	Gender	Level of studies	experience years	JOA	RU	TR	PEN	RES
	Mean	Std. Deviation									
Age	1.734	0.626	1								
Gender	1.532	0.501	-0.115	1							
Level of studies	2.492	0.563	-0.018	-0.013	1						
Job position	2.637	0.940	0.000	-0.018	-0.0136						
experience years	2.500	0.749	0.026	0.130	0.010	1					
JOA	4.660	1.022	-0.003	0.053	-0.121	0.051	1				
RU	4.915	1.600	0.132	0.026	0.048	0.022	0.225*	1			
TR	5.166	1.147	-0.017	0.126	-0.037	0.04	-0.063	0.103	1		
PEN	4.706	1.265	0.172	-0.065	0.017	0.011	0.132	0.247**	0.214*	1	
ORES	4.840	0.692	0.460	0.267*	0.049	-0.118	0.014	0.251**	0.234**	0.381**	1

\*\* Correlation is significant at the 0.01 level (2-tailed). Note: S.D. = Standard Deviation, JOA=Job analysis, RU=Recruitment, TR= Training, PEN=Compensations, OR= Organisational resilience.

In Table 2, exploratory factor analysis was conducted for all items in the scale. The result is shown where one factor appeared for each of the proposed constructs, confirming the evidence support for one dimension. All factor loadings took values higher than the recommended threshold ( $\lambda > 0.70$ ).

In addition, the psychometric analysis ; shows satisfactory levels of reliability for the formulations , as shown by composite reliabilities of 0.92 to 0.98 and shared variance coefficients of 0.62 to 0.87, was greater than the advised 0.50 minimum value (Fornell & Larcker, 1981).

**Table 2. Validity, reliability and internal consistency.**

	$\lambda^*$	R2	A. M.				
OR1	0.805	0.648	0.352				
OR2	0.970	0.941	0.059				
OR3	0.973	0.947	0.053	avg	0.878		
OR4	0.981	0.962	0.038	cr	0.987	alpha	0.984
OR5	0.752	0.566	0.434				
OR6	0.981	0.962	0.038				
OR7	0.982	0.964	0.036				
OR8	0.975	0.951	0.049				
OR9	0.981	0.962	0.038				
JOA1	0.878	0.771	0.229				
JOA2	0.870	0.757	0.243				
JOA3	0.868	0.753	0.247	avg	0.713		
JOA4	0.814	0.663	0.337	cr	0.961	alpha	0.936
JOA5	0.840	0.706	0.294				
JOA6	0.785	0.616	0.384				
JOA7	0.851	0.724	0.276				
PEN1	0.929	0.863	0.137				
PEN2	0.871	0.759	0.241				
PEN3	0.758	0.575	0.425	avg	0.762	alpha	0.93
PEN4	0.930	0.865	0.135	cr	0.934		

PEN5	0.865	0.748	0.252				
RU1	0.893	0.797	0.203				
RU2	0.796	0.634	0.366				
RU3	0.823	0.677	0.323	avg	0.719		
RU4	0.845	0.714	0.286	cr	0.924	alpha	0.915
RU5	0.878	0.771	0.229				
TR1	0.852	0.726	0.274				
TR2	0.782	0.612	0.388				
TR3	0.729	0.531	0.469	avg	0.620		
TR4	0.790	0.624	0.376	cr	0.949	alpha	0.906
TR5	0.850	0.723	0.278				
TR6	0.771	0.594	0.406				
TR7	0.730	0.533	0.467				

Note:  $\lambda^*$ =Standardised Structural Coefficient; R2=Reliability;  $\alpha$ = Cronbach Alpha; C. R.=Compound

Reliability; S. V.=Shared Variance; f. p.=fixed parameter; A. M.=Adjustment Measurements; JOA=Job analysis, RU=Recruitment, TR= Training, PEN=Compensations, OR= Organisational resilience.

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ (two-tailed).

**Table 3 Regression analysis**

	$\lambda^*$	R2	A. M.				
OR1	0.805	0.648	0.352				
OR2	0.970	0.941	0.059				
OR3	0.973	0.947	0.053	avg	0.878		
OR4	0.981	0.962	0.038	cr	0.987	alpha	0.984
OR5	0.752	0.566	0.434				
OR6	0.981	0.962	0.038				
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OR8	0.975	0.951	0.049				
OR9	0.981	0.962	0.038				
JOA1	0.878	0.771	0.229				
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JOA3	0.868	0.753	0.247	avg	0.713		
JOA4	0.814	0.663	0.337	cr	0.961	alpha	0.936
JOA5	0.840	0.706	0.294				
JOA6	0.785	0.616	0.384				
JOA7	0.851	0.724	0.276				
PEN1	0.929	0.863	0.137				
PEN2	0.871	0.759	0.241				
PEN3	0.758	0.575	0.425	avg	0.762	alpha	0.93
PEN4	0.930	0.865	0.135	cr	0.934		
PEN5	0.865	0.748	0.252				
RU1	0.893	0.797	0.203				
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Note:  $\lambda^*$ =Standardised Structural Coefficient;  $R^2$ =Reliability;  $\alpha$ = Cronbach Alpha; C. R.=Compound

Reliability; S. V.=Shared Variance; f. p.=fixed parameter; A. M.=Adjustment Measurements; JOA=Job analysis, RU=Recruitment, TR= Training, PEN=Compensations, OR= Organisational resilience.

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ (two-tailed).

Table 3 presents the results of the hierarchical regression method (Cohen and Cohen, 1983). We test our hypothesis in five models. In the model 1 step, the dependent variable of interest (OR) was regressed to the control variables. The human resource practices (job analysis, recruitment, training and compensation) were entered, respectively, in models 2-5.

Where H1 indicates that job analysis is positively related to organisational resilience, as shown in Model 2, JA ( $\beta = 0.167$ ,  $p < .05$ ), and this turns out to have a positive relationship with OR and has a significant positive relationship with CE and together they represent 11.8% of the variance in CE. Thus the data support the H1 hypotheses. The second hypothesis suggests that recruitment has to do with organisational resilience, as shown in Model 3. Recruitment ( $\beta = 0.181$ ,  $p < .05$ ), was positively associated with OR. 39.4% of the variance is in the OR. Thus, the data support hypothesis 2. Where RU contributes to providing the manpower needed by the organisation within the specifications that support resilience and effectiveness of performance (Lengnick-Hall et al., 2011).

The third hypothesis indicates that training is positively associated with organisational resilience. Where TRA ( $\beta = 0.162$ ,  $p < .01$ ) has a positive relationship with OR and represents 9.50% of the elasticity. Where training contributes to keeping the workforce present and able to deal with challenges and adapt to changes. Legnick-Hall et al., 2011 (van Eerde et al., 2008). The fourth hypothesis indicates that compensation is associated with organisational resilience where PEN, ( $\beta = 0.165$ ,  $p < .01$ ) has a positive and strong relationship with OR and represents 64.5% of organisational resilience and this supports the third hypothesis (Pangastuti & Efendi, 2020).

## **5.7. CONCLUSION**

### **5.7.1. Discussion**

The work environment at the present time is characterised by many successive technological developments, change in customer preferences and states of ambiguity and

uncertainty, so the concept of resilience emerges, which refers to the ability of companies to adapt to changes and recover (McDonald 2006).

Human resources play a vital role in organisational resilience (Lengnick-Hall et al.2011; Ho et al. 2014). The purpose of this paper is to study the nature of the relationship between human resource management practices and organisational resilience. Despite the increasing research on the role of human practices in supporting organisational resilience, we find that empirical evidence is still scarce. Our study aims to determine the standards that are available in these practices and that contribute to enhancing organisational resilience. In the end, to arrive at a list of requirements that must be based on these practices to achieve high and effective resilience and adapt to all changes and shocks. The results demonstrate that job analysis, training, recruitment, and compensation can all be used to facilitate organisational resilience.

### **5.7.2. Implications for practice**

This study's findings demonstrate the significance of job analysis, recruitment, training, and compensation as human resource practises with a significant impact on organisational resilience. This study provides important evidence for practice that human resources can contribute to organisational resilience. First, the results show that job analysis contributes to the formation of a base of knowledge of the skills and capabilities that must be available to perform jobs, so in order to contribute to enhancing organisational resilience , the analysis must be structured and proactive so that the organisation can identify what changes are in the tasks and determine the nature of the skills that It must be available to its employees (Siddique, 2004).

Second, recruitment relates to attracting a skilled workforce that contributes to increasing organisational resilience, as the organisation must determine the resources it will rely on to provide employees and, in the first step, select employees who are initially resilient (Ho et al. 2014). Third, our findings indicate that training design should be done proactively and based on an analysis of the needs that employees require to help them adapt and make appropriate decisions, thereby increasing workforce resilience (Lengnick-Hall and Beck, 2009).

Finally, in order to maintain workforce resilience , businesses must seek to design a compensation system, whether financial or non-financial, in which compensation is used to pay employees to improve their performance and empower them, and thus businesses are keen to maintain employee satisfaction and rewards for their efforts.

As a result, the compensation system must improve job security in order to maintain employee performance and thus resilience.

### **5.7.3. Limitations**

The current study can be viewed as a preliminary attempt to investigate the criteria that must be present in human resource practices that improve organisational resilience. Three limitations are used to evaluate our findings. First, despite the fact that objective measurements are frequently regarded as preferable, the study made extensive use of self-reported measures of key variables. Although the majority of the measures created for the study had fairly simple indicators, we were unable to gather enough data to be able to provide a more complete picture of all the variables.

Second, the current study only looked at a subset of control variables. This means that our theoretical formulation of how these practices affect systemic resilience is far from complete.

Finally, because the current study used a small sample size, we were unable to follow up on comparisons of company subgroups in terms of differences in business or other similar ratings. As a result, the current study's findings are preliminary in nature and are intended to pique the interest of future researchers in the relationship between HR practices and performance as outlined above.

### **5.7.4. Conclusion**

The current study sheds new light on the criteria that human resource practitioners should consider in order to increase an organisation's resilience. First, the study finds a link between job analysis, recruitment, training, and compensation and organisational resilience (Bouaziz & Smaoui Hachicha, 2018). Furthermore, the article emphasised a positive correlation between analysis, job analysis, and strategic focus in making the organisation more willing to adapt to changes. This was also confirmed in terms of hiring, training, and compensation. Although this article addressed some of the practices, more research in this area is required. Possibilities for future research The current study's strengths and limitations can be used to guide future research efforts. Extending the current model with other relevant moderate variables such as the company's business strategy, management style, and strategic direction is one way to look ahead. Future research must consider the potential contribution of a resilience work environment, employee empowerment, and other HR best practises to resilience . Empirical

studies of the interaction effects of these HR practices (HRPs), in particular, will help to further detail the process by which HRPs contribute to organisational resilience.

A second line of research will be to use case studies and longitudinal designs to test the research hypotheses developed in this study. It would be interesting to observe how the company's resilience evolves over time as these practices are implemented. The current study may serve as a motivator for HR professionals and practitioners to conduct similar research.

## 5.8. REFERENCES

- Abbasi, S. G., Tahir, M. S., Abbas, M., & Shabbir, M. S. (2020). Examining the relationship between recruitment & selection practices and business growth: An exploratory study. *Journal of Public Affairs*. <https://doi.org/10.1002/pa.2438>
- Abbasi, S. M., & Hollman, K. W. (2000). Turnover: The Real Bottom Line. *Public Personnel Management*, 29(3), 333–342. <https://doi.org/10.1177/009102600002900303>
- Acton, T., & Golden, W. (2003). Training the knowledge worker: a descriptive study of training practices in Irish software companies. *Journal of European Industrial Training*, 27(2/3/4), 137–146. <https://doi.org/10.1108/03090590310468958>
- Ahmad, S., & Schroeder, R. G. (2002). The importance of recruitment and selection process for sustainability of total quality management. *International Journal of Quality & Reliability Management*, 19(5), 540–550. <https://doi.org/10.1108/02656710210427511>
- Annarelli, A., & Nonino, F. (2016). Strategic and operational management of organizational resilience: Current state of research and future directions. *Omega*, 62, 1–18. <https://doi.org/10.1016/j.omega.2015.08.004>
- Anthony, W.P., Kacmar, K.M. and Perrewe, P.L. (2002) *Human Resource Management: A Strategic Approach*, 4th edn. New York: South-Western.
- Armstrong, M., & Taylor, S. (2020). *Armstrong's Handbook of Human Resource Management Practice* (15th ed.). Kogan Page.
- Awais Bhatti, M., Ali, S., Mohd Isa, M. F., & Mohamed Battour, M. (2014). Training transfer and transfer motivation: The influence of individual, environmental, situational, training design, and affective reaction factors. *Performance Improvement Quarterly*, 27(1), 51–82. <https://doi.org/10.1002/piq.21165>
- Ayanda, O. J., & Danlami S., A. (2011). *Strategic Human Resource Management and Organizational Performance in the Nigerian Manufacturing Sector: An Empirical*

- Investigation. *International Journal of Business and Management*, 6(9).  
<https://doi.org/10.5539/ijbm.v6n9p46>
- Balkin, D. B., & Gomez-Mejia, L. R. (1990). Matching compensation and organizational strategies. *Strategic Management Journal*, 11(2), 153–169.  
<https://doi.org/10.1002/smj.4250110207>
- Bertolino, M., Truxillo, D. M., & Fraccaroli, F. (2011). Age as moderator of the relationship of proactive personality with training motivation, perceived career development from training, and training behavioral intentions. *Journal of Organizational Behavior*, 32(2), 248–263. <https://doi.org/10.1002/job.670>
- Bouaziz, F., & Smaoui Hachicha, Z. (2018). Strategic human resource management practices and organizational resilience. *Journal of Management Development*, 37(7), 537–551.  
<https://doi.org/10.1108/jmd-11-2017-0358>
- Bromiley, P., & Rau, D. (2015). Operations management and the resource based view: Another view. *Journal of Operations Management*, 41(1), 95–106.  
<https://doi.org/10.1016/j.jom.2015.11.003>
- Brown, W., Deakin, S., Nash, D., & Oxenbridge, S. (2000). The Employment Contract: From Collective Procedures to Individual Rights. *British Journal of Industrial Relations*, 38(4), 611–629. <https://doi.org/10.1111/1467-8543.00182>
- Carpenter, M. A., & Sanders, W. G. (2002). Top management team compensation: the missing link between CEO pay and firm performance? *Strategic Management Journal*, 23(4), 367–375. <https://doi.org/10.1002/smj.228>
- Crichton, M. T., Ramsay, C. G., & Kelly, T. (2009). Enhancing Organizational Resilience Through Emergency Planning: Learnings from Cross-Sectoral Lessons. *Journal of Contingencies and Crisis Management*, 17(1), 24–37.  
<https://doi.org/10.1111/j.1468-5973.2009.00556.x>
- Davidescu, A. A., Apostu, S. A., Paul, A., & Casuneanu, I. (2020). Work Flexibility, Job Satisfaction, and Job Performance among Romanian Employees—Implications for Sustainable Human Resource Management. *Sustainability*, 12(15), 6086.  
<https://doi.org/10.3390/su12156086>
- De Moura, D., & Amelia Tomei, P. (2021). Strategic Management of Organizational Resilience (SMOR): a Framework Proposition. *Review of Business Management*, 23(3), 536–556.  
<https://doi.org/10.7819/rbgn.v.23i3.4118>
- Durham, C. C., & Bartol, K. M. (2015). Pay for Performance. *Handbook of Principles of Organizational Behavior*, 217–238. <https://doi.org/10.1002/9781119206422.ch12>.

- Epstein, R. A. (2000). *Constitutional Protection of Private Property and Freedom of Contract*. Garland Pub.
- Falola, H. O., Salau, O. P., Olokundun, M. A., Oyafunke-Omoniy, C. O., Ibidunni, A. S., & Osibanjo, O. A. (2018). Employees' Intrapreneurial Engagement Initiatives And Its Influence On Organisational Survival. *Business: Theory and Practice*, 19(0), 9–16. <https://doi.org/10.3846/btp.2018.02>
- Fiol, C. M., & Lyles, M. A. (1985). Organizational Learning. *Academy of Management Review*, 10(4), 803–813. <https://doi.org/10.5465/amr.1985.4279103>
- Ford, J.K., and Noe, R.A. (1987). Self Assessed Training Needs: The Effects of Attitudes Toward Training, Managerial Level and Function. *Personnel Psychology*, 40, 39–53.
- Giachetti, C., Manzi, G., & Colapinto, C. (2018). Entry Mode Degree of Control, Firm Performance and Host Country Institutional Development: A Meta-Analysis. *Management International Review*, 59(1), 3–39. <https://doi.org/10.1007/s11575-018-0365-z>
- Goldstein, I. (1986). *Training in organizations: Needs assessment, development, and evaluation*. Monterey, CA: Brooks/Cole
- Gomez-Mejia, L. R., & Balkin, D. B. (1989). Effectiveness of Individual and Aggregate Compensation Strategies. *Industrial Relations*, 28(3), 431–445. <https://doi.org/10.1111/j.1468-232x.1989.tb00736.x>
- Gupta, N., & Shaw, J. D. (2014). Employee compensation: The neglected area of HRM research. *Human Resource Management Review*, 24(1), 1–4. <https://doi.org/10.1016/j.hrmr.2013.08.007>
- Hamouche, S. (2021). Human resource management and the COVID-19 crisis: implications, challenges, opportunities, and future organizational directions. *Journal of Management & Organization*, 1–16. <https://doi.org/10.1017/jmo.2021.15>
- Ho, M., Verreyne, M. L., T.T. Teo, S., Bentley, T., & Galvin, P. (2014). Organizational resilience and the challenge for human resource management: Conceptualizations and frameworks for theory and practice. 4th Annual International Conference on Human Resource Management and Professional Development for the Digital Age (HRM&PD 2014). [https://doi.org/10.5176/2251-2349\\_hrmpd14.09](https://doi.org/10.5176/2251-2349_hrmpd14.09)
- Holm, A. B. (2012). E-recruitment: Towards an Ubiquitous Recruitment Process and Candidate Relationship Management. *German Journal of Human Resource Management: Zeitschrift Für Personalforschung*, 26(3), 241–259. <https://doi.org/10.1177/239700221202600303>

- Huselid, M. A. (1995). The Impact Of Human Resource Management Practices On Turnover, Productivity, And Corporate Financial Performance. *Academy of Management Journal*, 38(3), 635–672. <https://doi.org/10.5465/256741>
- Iles, P. (1997). Sustainable high-potential career development: a resource-based view. *Career Development International*, 2(7), 347–353. <https://doi.org/10.1108/13620439710187981>
- Inkinen, H. (2016). Review of empirical research on knowledge management practices and firm performance. *Journal of Knowledge Management*, 20(2), 230–257. <https://doi.org/10.1108/jkm-09-2015-0336>
- Jia Wang, Hutchins, H. M., & Garavan, T. N. (2009, February 15). Exploring the Strategic Role of Human Resource Development in Organizational Crisis Management. *Human Resource Development Review*, 8(1), 22–53. <https://doi.org/10.1177/1534484308330018>
- Kai Ming Au, A., Altman, Y., & Roussel, J. (2008). Employee training needs and perceived value of training in the Pearl River Delta of China. *Journal of European Industrial Training*, 32(1), 19–31. <https://doi.org/10.1108/03090590810846548>
- Katou, A. A., & Budhwar, P. S. (2006). The effect of human resource management policies on organizational performance in Greek manufacturing firms. *Thunderbird International Business Review*, 49(1), 1–35. <https://doi.org/10.1002/tie.20129>
- Kehoe, R. R., & Wright, P. M. (2010). The Impact of High-Performance Human Resource Practices on Employees' Attitudes and Behaviors. *Journal of Management*, 39(2), 366–391. <https://doi.org/10.1177/0149206310365901>
- King, D. D., Newman, A., & Luthans, F. (2015). Not if, but when we need resilience in the workplace. *Journal of Organizational Behavior*, 37(5), 782–786. <https://doi.org/10.1002/job.2063>
- Lane, T. S., Armin, J., & Gordon, J. S. (2015). Online Recruitment Methods for Web-Based and Mobile Health Studies: A Review of the Literature. *Journal of Medical Internet Research*, 17(7), e183. <https://doi.org/10.2196/jmir.4359>
- Lau, C. M., & Sholihin, M. (2005). Financial and nonfinancial performance measures: How do they affect job satisfaction? *The British Accounting Review*, 37(4), 389–413. <https://doi.org/10.1016/j.bar.2005.06.002>
- Lee, J. S., Back, K. J., & Chan, E. S. (2015). Quality of work life and job satisfaction among frontline hotel employees. *International Journal of Contemporary Hospitality Management*, 27(5), 768–789. <https://doi.org/10.1108/ijchm-11-2013-0530>

- Lengnick-Hall, C. A., & Beck, T. E. (2005). Adaptive Fit Versus Robust Transformation: How Organizations Respond to Environmental Change. *Journal of Management*, 31(5), 738–757. <https://doi.org/10.1177/0149206305279367>
- Lengnick-Hall, C. A., and T. E. Beck. 2009. Resilience Capacity and Strategic Agility: Prerequisites for Thriving in a Dynamic Environment. In *Resilience Engineering Perspectives*, edited by C. Nemeth, E. Hollnagel, and S. Dekker, chapter 3, 39–70. Aldershot, UK: Ashgate Publishing
- Lengnick-Hall, C. A., Beck, T. E., & Lengnick-Hall, M. L. (2011). Developing a capacity for organizational resilience through strategic human resource management. *Human Resource Management Review*, 21(3), 243–255. <https://doi.org/10.1016/j.hrmr.2010.07.001>
- Levine, E. L. (1983). *Everything You Always Wanted to Know About Job Analysis: And More : A Job Analysis Primer*. Univ of Southern Florida.
- Lewis, F. L. (1986, March). A survey of linear singular systems. *Circuits, Systems, and Signal Processing*, 5(1), 3–36. <https://doi.org/10.1007/bf01600184>
- Liu, Y., L. Cooper, C., & Y. Tarba, S. (2019). Resilience, wellbeing and HRM: a multidisciplinary perspective. *The International Journal of Human Resource Management*, 30(8), 1227–1238. <https://doi.org/10.1080/09585192.2019.1565370>
- Luthans, F., & Youssef, C. M. (2004). Human, Social, and Now Positive Psychological Capital Management: Organizational Dynamics, 33(2), 143–160. <https://doi.org/10.1016/j.orgdyn.2004.01.003>
- Ma, Z., Xiao, L., & Yin, J. (2018). Toward a dynamic model of organizational resilience. *Nankai Business Review International*, 9(3), 246–263. <https://doi.org/10.1108/nbri-07-2017-0041>
- McEntire, L. E., Dailey, L. R., Osburn, H. K., & Mumford, M. D. (2006). Innovations in job analysis: Development and application of metrics to analyze job data. *Human Resource Management Review*, 16(3), 310–323. <https://doi.org/10.1016/j.hrmr.2006.05.004>
- Minbaeva, D. B. (2005). HRM practices and MNC knowledge transfer. *Personnel Review*, 34(1), 125–144. <https://doi.org/10.1108/00483480510571914>
- Montesino, M. U. (2002). Strategic alignment of training, transfer-enhancing behaviors, and training usage: A posttraining study. *Human Resource Development Quarterly*, 13(1), 89–108. <https://doi.org/10.1002/hrdq.1015>



- Morgan, R. B., & Casper, W. J. (2000). Examining the factor structure of participant reactions to training: A multidimensional approach. *Human Resource Development Quarterly*, 11(3), 301–317. [https://doi.org/10.1002/1532-1096\(200023\)11:3](https://doi.org/10.1002/1532-1096(200023)11:3)
- Moser, K. (2005). Recruitment Sources and Post-Hire Outcomes: The Mediating Role of Unmet Expectations. *International Journal of Selection and Assessment*, 13(3), 188–197. <https://doi.org/10.1111/j.1468-2389.2005.00314.x>
- Mudashiru, M. A., O.A., I., & M., A. (2013). The Impacts of well Planned Recruitment and Selection Process on Corporate Performance in Nigerian Banking Industry (A Case Study of First Bank Plc 2004-2011). *International Journal of Academic Research in Business and Social Sciences*, 3(9). <https://doi.org/10.6007/ijarbss/v3-i9/251>
- Ngoc Su, D., Luc Tra, D., Thi Huynh, H. M., Nguyen, H. H. T., & O'Mahony, B. (2021). Enhancing resilience in the Covid-19 crisis: lessons from human resource management practices in Vietnam. *Current Issues in Tourism*, 24(22), 3189–3205. <https://doi.org/10.1080/13683500.2020.1863930>
- Noble, C. H. (2008). The Influence of Job Security on Field Sales Manager Satisfaction: Exploring Frontline Tensions. *Journal of Personal Selling & Sales Management*, 28(3), 247–261. <https://doi.org/10.2753/pss0885-3134280303>
- Ofori, D., & Aryeetey, M. (2011). Recruitment and Selection Practices in Small and Medium Enterprises: Perspectives from Ghana. *International Journal of Business Administration*, 2(3). <https://doi.org/10.5430/ijba.v2n3p45>
- Okoye, P., & Ezejiofor, R. A. (2013). The Effect of Human Resources Development on Organizational Productivity. *International Journal of Academic Research in Business and Social Sciences*, 3(10). <https://doi.org/10.6007/ijarbss/v3-i10/295>
- Pangastuti, P. A. D., & Efendi, R. (2020). The effect of work motivation and compensation on employee performance. *International Journal of Multicultural and Multireligious Understanding*, 7(3), 292–299. <https://doi.org/10.18415/ijmmu.v7i3.1534>
- Rahman, M., Akhter, R., Chowdhury, S., Islam, S., & Haque, R. (2013). HRM Practices and its Impact on Employee Satisfaction: A Case of Pharmaceutical Companies in Bangladesh. *International Journal of Research in Business and Social Science* (2147- 4478), 2(3), 62–67. <https://doi.org/10.20525/ijrbs.v2i3.74>
- Raziq, A., & Maulabakhsh, R. (2015). Impact of Working Environment on Job Satisfaction. *Procedia Economics and Finance*, 23, 717–725. [https://doi.org/10.1016/s2212-5671\(15\)00524-9](https://doi.org/10.1016/s2212-5671(15)00524-9)

- Rehman, K. U., Mata, M. N., Martins, J. M., Mariam, S., Rita, J. X., & Correia, A. B. (2021,). SHRM Practices Employee and Organizational Resilient Behavior: Implications for Open Innovation. *Journal of Open Innovation: Technology, Market, and Complexity*, 7(2), 159. <https://doi.org/10.3390/joitmc7020159>
- Ruiz-Martin, C., Lopez-Paredes, A., & Wainer, G. (2018). What we know and do not know about organizational resilience. *International Journal of Production Management and Engineering*, 6(1), 11. <https://doi.org/10.4995/ijpme.2018.7898>
- Salas, E., Tannenbaum, S. I., Kraiger, K., & Smith-Jentsch, K. A. (2012). The Science of Training and Development in Organizations. *Psychological Science in the Public Interest*, 13(2), 74–101. <https://doi.org/10.1177/1529100612436661>
- Sanchez, J. I., & Levine, E. L. (2009). What is (or should be) the difference between competency modeling and traditional job analysis? *Human Resource Management Review*, 19(2), 53–63. <https://doi.org/10.1016/j.hrmr.2008.10.002>
- Shahzad, K., Bajwa, S. U., Ansted, R. B., Mamoon, D., & Khaliq-ur-Rehman. (2016). Evaluating human resource management capacity for effective implementation of advanced metering infrastructure by electricity distribution companies in Pakistan. *Utilities Policy*, 41, 107–117. <https://doi.org/10.1016/j.jup.2016.06.011>
- Siddique, C. (2004). Job analysis: a strategic human resource management practice. *The International Journal of Human Resource Management*, 15(1), 219–244. <https://doi.org/10.1080/0958519032000157438>
- Singh, P. (2008). Job analysis for a changing workplace. *Human Resource Management Review*, 18(2), 87–99. <https://doi.org/10.1016/j.hrmr.2008.03.004>
- Stone, D. L., & Dulebohn, J. H. (2013). Emerging issues in theory and research on electronic human resource management (eHRM). *Human Resource Management Review*, 23(1), 1–5. <https://doi.org/10.1016/j.hrmr.2012.06.001>
- Terpstra, D. E., & Rozell, E. J. (2006). The Relationship Of Staffing Practices To Organizational Level Measures Of Performance. *Personnel Psychology*, 46(1), 27–48. <https://doi.org/10.1111/j.1744-6570.1993.tb00866.x>
- Torre, E. D., Pelagatti, M., & Solari, L. (2014). Internal and external equity in compensation systems, organizational absenteeism and the role of explained inequalities. *Human Relations*, 68(3), 409–440. <https://doi.org/10.1177/0018726714528730>
- Tukamuhabwa, B. R., Stevenson, M., Busby, J., & Zorzini, M. (2015). Supply chain resilience: definition, review and theoretical foundations for further study. *International Journal of*

<https://doi.org/10.1080/00207543.2015.1037934>

- Van Eerde, W., Simon Tang, K., & Talbot, G. (2008). The mediating role of training utility in the relationship between training needs assessment and organizational effectiveness. *The International Journal of Human Resource Management*, 19(1), 63–73. <https://doi.org/10.1080/09585190701763917>
- Van Herpen, M., Van Praag, M., & Cools, K. (2005). The Effects of Performance Measurement and Compensation on Motivation: An Empirical Study. *De Economist*, 153(3), 303–329. <https://doi.org/10.1007/s10645-005-1990-z>
- Vardarlier, P. (2016). Strategic Approach to Human Resources Management During Crisis. *Procedia - Social and Behavioral Sciences*, 235, 463–472. <https://doi.org/10.1016/j.sbspro.2016.11.057>
- Vathanophas, V. (2006). Competency Requirements for Effective Job Performance in Thai Public Sector. *Contemporary Management Research*, 3(1), 45. <https://doi.org/10.7903/cmr.49>
- Vogus, T. J., & Sutcliffe, K. M. (2007). Organizational resilience: Towards a theory and research agenda. 2007 IEEE International Conference on Systems, Man and Cybernetics. <https://doi.org/10.1109/icsmc.2007.4414160>
- Weick, K. E. (1993). The Collapse of Sensemaking in Organizations: The Mann Gulch Disaster. *Administrative Science Quarterly*, 38(4), 628. <https://doi.org/10.2307/2393339>
- Williams, P., McDonald, P., & Mayes, R. (2021). Recruitment in the gig economy: attraction and selection on digital platforms. *The International Journal of Human Resource Management*, 32(19), 4136–4162. <https://doi.org/10.1080/09585192.2020.1867613>

# *Capítulo 6*

## **6. CONCLUSIONES**

### **6.1. Conclusión**

Este capítulo presenta un resumen general de las diversas contribuciones realizadas por el trabajo en su conjunto, así como las aportaciones independientes de cada uno de los capítulos de esta tesis doctoral.

En primer lugar, se expondrán las conclusiones generales más significativas alcanzadas en la investigación, así como las conclusiones específicas de cada capítulo. A continuación, se destacarán las principales implicaciones teóricas y prácticas. Posteriormente, se describirán las limitaciones de la investigación, tanto relacionadas con la muestra como con los problemas encontrados en la medición, el sesgo introducido por la subjetividad de las respuestas en las encuestas y el estudio longitudinal de variables. Por último, se explorarán las posibles líneas de investigación futuras que pueden derivarse de este trabajo.

Los capítulos segundo y tercero, que constituyen la primera parte de este trabajo y están interrelacionados, aportan un estudio en profundidad sobre la transformación digital y el uso de las tecnologías digitales en relación con variables como el aprendizaje organizacional e innovación, según se presenta en el segundo capítulo. En el tercer capítulo, además de abordar las tecnologías digitales, se examina la variable de orientación emprendimiento. Ambos capítulos investigan el impacto de estas variables en la resiliencia organizacional. Como se detallará más adelante, hay escasa investigación sobre los efectos del uso de tecnologías digitales en el desarrollo de capacidades dinámicas, aprendizaje organizacional, innovación y orientación empresarial, y cómo estos mejoran la resiliencia organizacional.

En el Capítulo Cuatro, que constituye la segunda parte de este trabajo, se explora cómo la responsabilidad social empresarial, las tecnologías digitales y el emprendimiento contribuyen a mejorar la resiliencia organizacional en las PYMES. Este estudio se basa en la teoría de las capacidades dinámicas para revelar los mecanismos detrás de la RSE, las tecnologías digitales y la resiliencia organizacional en el contexto empresarial de Andalucía.

En la tercera parte de este trabajo, en el Capítulo 5, se examinan las formas en que las prácticas de recursos humanos (PRH), como el análisis de puestos, la capacitación y desarrollo, la compensación y la contratación, contribuyen a mejorar la resiliencia organizacional en el sector de las PYMES en Palestina. Una de las contribuciones destacadas de este estudio es el análisis de la relación entre las PRH y la resiliencia organizacional en las dimensiones

cognitiva, contextual y conductual. El enfoque en el análisis de puestos, reclutamiento y selección, capacitación, desarrollo y compensación es esencial para potenciar las capacidades resiliencia de los empleados y alinear su comportamiento con la estrategia de la organización. El análisis detallado aborda las características específicas de estas prácticas fundamentales para mejorar la resiliencia y proporciona información detallada sobre sus dimensiones cognitivas, contextuales y conductuales. Una vez formuladas las principales contribuciones de este trabajo, se realiza un análisis breve de las conclusiones principales obtenidas en cada capítulo para demostrar cómo responden a los objetivos establecidos inicialmente.

El segundo capítulo, titulado “Digital transformation influence on organisational resilience through organisational learning and innovation”, refleja cómo el dinamismo de los entornos actuales impulsa la necesidad de las empresas de una transformación digital como una estrategia para mejorar el desempeño y la resiliencia empresarial (Schallmo et al., 2019). El estudio demuestra que la transformación digital, al aprovechar las tecnologías digitales para mejorar las ventajas competitivas mediante la utilización eficiente de los recursos existentes y el desarrollo de nuevas capacidades (Liu et al., 2016), requiere cambios estructurales y organizativos (Bharadwaj et al., 2013). La integración de las tecnologías digitales con las capacidades organizativas es crucial para aprovechar al máximo la digitalización (Raj et al., 2022). Además de mejorar las actividades empresariales, el uso de estas tecnologías tiene efectos conductuales y estructurales en la gestión del conocimiento. Las diversas técnicas tecnológicas contribuyen al cambio de comportamiento, mejoran la interacción humana y facilitan la transferencia y desarrollo continuo del conocimiento. A nivel estructural, estas transformaciones facilitan el acceso a fuentes de conocimiento internas o externas, promoviendo así su desarrollo (Vega-Jurado et al., 2009). La innovación corporativa también contribuye a la adaptación al cambio, la participación de los clientes y la mejora de las carteras de negocios, unificando así el plan de negocios sostenible a largo plazo.

En el tercer capítulo, "The role of digital technologies in fostering organisational resilience through entrepreneurial orientation : A Mini review", se destaca cómo la adopción e integración de tecnologías digitales en la estrategia empresarial mejora la orientación hacia el emprendimiento, promoviendo comportamientos innovadores y asunción de riesgos (Hervé et al., 2020). Estas tecnologías ofrecen oportunidades diversas, aumentando las posibilidades de encontrar oportunidades de alta calidad (Spencer, 2016). Por lo tanto, la digitalización influye en la orientación empresarial para lograr un rendimiento óptimo mediante la inversión en tecnologías adecuadas (Lumpkin y Dess, 1996). Los resultados confirman que confiar en las

tecnologías digitales contribuye a identificar y explotar oportunidades empresariales, mejorar las operaciones y gestionar eficazmente los riesgos. Además, la toma de decisiones basada en datos fomenta una cultura de experimentación, aprendizaje y mejora continua, elementos esenciales para guiar el emprendimiento (Soltanifar y Smailhodžić, 2020).

El Capítulo 4, "Enhancing Social Responsibility and Resilience Through Entrepreneurship and Digital Environment", desarrollado en la segunda parte de este trabajo, destaca el uso estratégico de la tecnología digital por parte de las PYMES para mejorar la RSE y la resiliencia a la disrupción. Se han identificado orientaciones prácticas para las PYMES en entornos empresariales dinámicos. Formuladores de políticas, líderes empresariales y emprendedores pueden aprovechar estos conocimientos para promover prácticas sostenibles e innovadoras (Rauch et al., 2018). Adoptar la responsabilidad social corporativa y el emprendimiento conduce a una mayor resiliencia, permitiendo a las pequeñas y medianas empresas prosperar en medio de desafíos y mantener una ventaja competitiva (Íyigün, 2015). Reconocer y aprovechar las responsabilidades sociales corporativas, la tecnología digital y la sinergia del espíritu empresarial permite a las pequeñas y medianas empresas crear entornos comerciales resilientes para lograr un éxito duradero.

En segundo lugar, otra contribución novedosa es que proponemos que este enfoque basado en datos permita a las pequeñas y medianas empresas identificar y capitalizar proactivamente nuevas oportunidades de negocio, promoviendo una mentalidad emprendedora (Wang et al., 2020). Estas tecnologías digitales facilitan la comunicación y la colaboración dentro de las organizaciones, esenciales para guiar el emprendimiento. Herramientas digitales como plataformas de gestión de proyectos, herramientas de comunicación virtual y software de colaboración permiten a los empleados trabajar juntos sin problemas, compartir ideas y contribuir al desarrollo de nuevos productos o servicios (Manetti y Bellucci, 2016). En tercer lugar, asumimos que las tecnologías digitales permiten a las empresas implementar prácticas sostenibles, contribuyendo así a la responsabilidad social corporativa basada en capacidades dinámicas. Esto permite a las organizaciones integrar la sostenibilidad en sus operaciones, productos y servicios, contribuyendo al bienestar ambiental y social, y mejorando la resiliencia organizacional (Troise y Camilleri, 2021). Por último, las organizaciones pueden utilizar las tecnologías digitales para participar en la innovación social y abordar los desafíos sociales a través de la responsabilidad social corporativa. Las tecnologías digitales pueden ayudar a desarrollar productos o servicios innovadores que aborden cuestiones sociales como la pobreza, desigualdad, salud o educación (George et al., 2020).

En el Capítulo 5, "How HR Practices Enhance Organisational resilience", se exploran las formas en que las Prácticas de Recursos Humanos (PRH), como el análisis de puestos, la capacitación y desarrollo, la compensación y la contratación, contribuyen a mejorar la resiliencia organizacional en el sector de las PYMES. Al utilizar la teoría de la visión basada en recursos, nuestro objetivo es descubrir los mecanismos subyacentes que vinculan las prácticas de recursos humanos con la resiliencia organizacional. Uno de los hallazgos destacados de este artículo es que el análisis de puestos estructurado y estratégico contribuye a la resiliencia organizacional. Las empresas que deseen sobrevivir en un entorno competitivo y enfrentar cambios en la naturaleza del trabajo, como una menor especialización, rotación o tareas laborales compartidas, deben llevar a cabo un análisis estratégico del puesto (Singh, 2008). Basándonos en esto, el análisis de puestos contribuye a mejorar la resiliencia organizacional, sirviendo como una guía que ayuda a identificar las habilidades necesarias y permite a la organización ampliar las descripciones de puestos, diversificando así las fuentes de empleo y contribuyendo a la eficiencia y eficacia del equipo al ampliar el conocimiento (Lengnick-Hall et al., 2011). Además, el análisis proactivo ayuda a resolver problemas y desarrollar soluciones no convencionales e innovadoras para los desafíos previstos (Siddique, 2004).

La formación basada en un análisis de las necesidades de los empleados y vinculada a la estrategia de la empresa también es importante para la resiliencia, mejorando las habilidades de los empleados que, al integrarse a nivel organizacional, mejoran la capacidad de respuesta (Jia Wang et al., 2009). Por lo tanto, la capacitación debe incluir una variedad de estándares para mejorar la resiliencia organizacional y el desempeño laboral, adoptando un enfoque proactivo en la formación que va más allá de las habilidades laborales individuales para comprender las habilidades laborales, desarrollar habilidades de liderazgo, fomentar el pensamiento creativo y la resolución de problemas (Bertolino et al., 2011).

Finalmente, el proceso de reclutamiento, llevado a cabo de manera oportuna según las necesidades de la empresa, permite formar un equipo de trabajo presente y listo en todo momento. Un proceso de reclutamiento sistemático se ocupa de recopilar información precisa sobre los candidatos, como calificaciones, habilidades y experiencia, evaluándolos para tomar decisiones laborales informadas. Esto se debe a que los empleados con habilidades y experiencia social contribuyen a la organización, proporcionando una ventaja competitiva y contribuyendo al éxito general (Armstrong y Taylor, 2020). El sistema de compensación ayuda a la empresa a permitir que sus empleados mejoren su desempeño, contribuyendo también al sentido de seguridad laboral y la identificación de la seguridad laboral, elementos esenciales



para lograr el compromiso de los empleados y mejorar el desempeño. Mejorar la resiliencia, la productividad y la capacidad de adaptarse a los cambios y la incertidumbre afectará el rendimiento y la resiliencia de la organización (Bouaziz & Hachicha, 2018).

## **6.2. IMPLICACIONES DEL TRABAJO DE INVESTIGACIÓN**

Desarrollamos en este apartado una serie de implicaciones que se desprenden de las conclusiones obtenidas y que consideramos que aumentan el interés de la investigación tanto para investigadores como para directivos.

### **6.2.1. Implicaciones teóricas**

A través de la investigación realizada en el Capítulo 2, destacamos que amplía el conocimiento sobre un tema que no ha sido muy discutido en la literatura, como es cómo la transformación digital contribuye al aprendizaje de dominio, teniendo el potencial de elevar la resiliencia de las empresas, especialmente cuando el uso de las tecnologías digitales está en un alto nivel. Utilizando la teoría de la capacidad dinámica, la integración de tecnologías digitales en diversos procesos provoca cambios en la forma en que se gestionan los negocios, productos, servicios y procesos de negocio (Nambisan et al., 2019). En este sentido, nuestra investigación muestra que la transformación digital conduce a cambios radicales o discontinuos en los procesos productivos de base tecnológica.

Esto se debe a que el aprendizaje organizacional, la agilidad, la innovación y las tecnologías digitales son componentes esenciales para la supervivencia y la prosperidad empresarial. Los nuevos conocimientos añadidos a la memoria organizacional de una empresa la ayudan a mantenerse actualizada, adaptable y dinámica. Asimismo, los directivos de las PYME trabajan eficazmente para gestionar las crisis y disrupciones mediante una buena gestión de los recursos de la empresa, como el empleo de tecnologías digitales, el apoyo a los procesos de transformación digital y la mejora de su capacidad dinámica, tomando decisiones informadas (Tees et al., 2016). Esto mejora la capacidad de la organización para adaptarse y prosperar en tiempos de crisis (Lee et al., 2013).

Otro efecto importante es que un aumento en las competencias en conocimiento tecnológico motiva a la empresa a buscar nuevas oportunidades o identificar ideas innovadoras donde otros no las reconocen (Woolley et al., 2010), lo que hace que la empresa sea más emprendedora.

Además, el aprendizaje organizacional es una variable estratégica para las empresas que intentan lanzar nuevos productos o crear nuevos mercados, ya que necesitan innovación continua para superar la intensa competencia (Cefis y Marsili, 2005). El aprendizaje mejora la creatividad, el acceso a nuevas ideas y mejora la comprensión y solicitud. Promueve así la innovación, que aprovecha este conocimiento y lo aplica al desarrollo de los procesos de negocio, permitiendo a la organización sobrevivir y continuar.

Por último, las tecnologías digitales conducen a una mejor comprensión de las necesidades del mercado y de los consumidores, aumentando la capacidad de la empresa para lograr crecimiento y ganancias (Pesce et al., 2019). Además, este proceso ayuda a aumentar la resiliencia organizacional, especialmente cuando en este modelo se integra la gestión del conocimiento y la transferencia de información, lo que incrementa la competitividad (Namdarian et al., 2020). La capacidad de una organización para aprender se refleja positivamente en su resiliencia y respuesta al cambio (Duchek et al., 2019), así como en su uso de nuevos conocimientos y precedentes, ayudando a fomentar la innovación empresarial (Migdadi, 2019).

Entre las implicaciones teóricas del Capítulo 3, resaltamos, desde la perspectiva de la teoría de la ventaja de los recursos, que la integración de herramientas digitales permite a las empresas mejorar su resiliencia estratégica al adaptarse rápidamente a las nuevas condiciones del mercado (Elia et al., 2020). La resiliencia y adaptabilidad inherentes a la EO (Emprendimiento Organizacional) permiten a las empresas responder eficazmente a los cambios en el entorno empresarial, contribuyendo a su competitividad y resiliencia ante disrupciones o crisis (Jean et al., 2021). Además, las tecnologías digitales facilitan la utilización de recursos, permitiendo a las empresas aprovechar eficazmente sus recursos y capacidades para adaptarse a circunstancias cambiantes (Kane et al., 2019). El ingenio de las empresas emprendedoras, combinado con las herramientas digitales, les permite superar las disrupciones aprovechando las alianzas estratégicas, la subcontratación o la diversificación (Rauch et al., 2009).

En el Capítulo 4, nuestro estudio se enmarca conceptualmente en la Teoría de la Capacidad Dinámica (DCT) como una destacada metodología de gestión estratégica, explicando los mecanismos a través de los cuales las organizaciones logran y mantienen una ventaja competitiva. Desarrollada como una extensión de la visión estática basada en recursos (RBV), la DCT aborda una falta dentro de la RBV en la comprensión de cómo las entidades

integran recursos y capacidades dentro de un contexto dinámico (Winter, 2003; Kraaijenbrink et al., 2010; Pavlou y Sawy, 2011).

Utilizamos principios de capacidades dinámicas para explicar las mejoras simbióticas en la resiliencia organizacional resultantes de la integración de las tecnologías digitales y el espíritu empresarial en las empresas, facilitadas a través de una perspectiva de RSE (Responsabilidad Social Empresarial). Las tecnologías y plataformas digitales avanzadas desempeñan un papel fundamental en mejorar la sostenibilidad y mitigar los riesgos, así como en fortalecer la posición empresarial ética, fomentar el espíritu de innovación, facilitar la adaptabilidad y respaldar proyectos colaborativos con diversas partes interesadas, generando así valor. Además, las tecnologías digitales actúan como catalizadores del espíritu empresarial, proporcionando nuevas vías para la creatividad y los esfuerzos colaborativos. Las plataformas en línea ofrecen oportunidades para la inversión en impacto social y ambiental, el crowdfunding y la innovación social (Holzmann y Gregori, 2023; Si et al., 2023).

Desde el punto de vista teórico del Capítulo 5 y basándonos en la perspectiva de los recursos, la formación se considera una inversión en recursos humanos, ya que proporciona a los empleados conocimientos y habilidades, al mismo tiempo que aumenta su capacidad de adaptación. Como resultado, los empleados son considerados una ventaja competitiva, lo que permite a la empresa lograr resultados positivos (Albrecht et al., 2015). Por lo tanto, el capital humano constituye una base importante sobre la cual las organizaciones pueden desarrollar resiliencia. Mejorar las habilidades de los empleados contribuye a la capacidad de respuesta a nivel organizacional (Kuntz et al., 2017). La capacitación se convierte en un componente crítico de la resiliencia organizacional, y sus diferentes tipos contribuyen a fortalecer dicha resiliencia (Crichton et al., 2009).

Además, desde una perspectiva basada en recursos (RBV), las organizaciones obtienen conocimiento sobre sus recursos y planes de desarrollo, lo que les otorga una ventaja competitiva. Esto se logra mediante el uso de métodos de contratación adecuados, la estrategia de reclutamiento y selección de la empresa, así como la formación en el puesto de trabajo y los recursos de la empresa. Estos métodos se seleccionaron en función de su validez, neutralidad, ámbito de aplicación y costo (Lane et al., 2015).

Asimismo, el enfoque centrado en competencias enfatiza la motivación de los empleados, la adaptabilidad, la orientación al trabajo en equipo y otras características necesarias para un desempeño laboral exitoso. Para recopilar dicha información, la mayoría de las organizaciones

utilizan alguna variación del enfoque de incidentes críticos. A diferencia de los enfoques estándar, que normalmente intentan obtener información estandarizada entre diferentes grupos laborales a través de una combinación de listas de verificación y entrevistas enviadas por correo o autoadministradas, el enfoque de incidentes críticos genera datos relevantes al observar las tareas y comportamientos de los empleadores en situaciones críticas (Anthony et al., 2002).

Además, la compensación tiene un impacto positivo y significativo en el desempeño de los empleados (Pangastuti et al., 2020). La compensación contribuye a mejorar la sensación de seguridad laboral de los empleados y a definir la seguridad laboral, que es un elemento esencial para lograr el compromiso de los empleados y mejorar el desempeño (Noble, 2008). Además, mejora el sentido de aprecio de los empleados, lo cual incrementa la resiliencia, la productividad y la capacidad de adaptarse a los cambios y la incertidumbre, afectando positivamente el desempeño y la resiliencia de la organización (Bouaziz y Hachicha, 2018).

### ***6.2.2. Implicación práctico***

En el Capítulo 2, nuestro estudio proporciona importantes ideas para la práctica. En primer lugar, la transformación digital ayuda a generar cambios, ya sea en general o en unidades específicas de la empresa, mediante la introducción de una nueva infraestructura basada en tecnologías digitales. Por lo tanto, el proceso de apoyo a las tecnologías digitales debe ser una transformación gradual y estratégica basada en el estudio de las necesidades de la empresa. Esto implica evaluar la disponibilidad de los conocimientos necesarios, estudiar los recursos de la empresa y su capacidad para implementar estas estrategias, y determinar los aspectos que requieren innovación y su grado. De esta manera, la transformación digital puede llevarse a cabo de manera organizada, de acuerdo con los cambios organizacionales requeridos (Liu et al., 2016).

En segundo lugar, los gerentes deben facilitar el uso de tecnologías digitales dentro de las organizaciones y crear un contexto organizacional que favorezca la adquisición y el intercambio de conocimientos. De esta manera, la empresa puede utilizar sus recursos para tomar medidas proactivas para mejorar su competitividad y obtener una ventaja competitiva sostenible (Newbert, 2008). Mejorar el proceso de aprendizaje de la empresa también contribuye a la innovación. Fomentar el uso de tecnologías digitales dentro de la organización para transferir conocimiento de manera efectiva permite a las organizaciones innovar más y abordar los desafíos que enfrentan estas PYMEs. Este resultado se produce especialmente al compartir conocimientos (Wang y Wang, 2012). El aprendizaje organizacional es esencial para mejorar el

desempeño organizacional y mantener una fuente de ventaja competitiva (Bolívar-Ramos et al., 2012). Por lo tanto, este conocimiento también contribuye a la innovación y al desarrollo de productos, servicios y procesos comerciales que aportan a la ventaja competitiva.

En tercer lugar, las organizaciones deben implementar medidas para aumentar la agilidad organizacional e impactar positivamente en la transformación digital. Esto se debe a que los directivos de las PYMEs trabajan eficazmente para gestionar las crisis y perturbaciones gestionando bien los recursos de la empresa y mejorando su capacidad dinámica, tomando decisiones informadas (Tees et al., 2016). Esto mejora la capacidad de la organización para adaptarse y prosperar, desempeñándose bien en tiempos de crisis (Lee et al., 2013). Además, las PYMEs deben desarrollar y agilizar su fuerza laboral, aprovechando al mismo tiempo las tecnologías digitales, el aprendizaje y la innovación.

En relación con el Capítulo Cinco, este estudio proporciona evidencia importante para la práctica de que los recursos humanos pueden contribuir a la resiliencia organizacional. En primer lugar, los resultados mostraron que el análisis de puestos contribuye a formar una base para conocer las habilidades y capacidades necesarias para desempeñar los puestos de trabajo. Para contribuir a mejorar la resiliencia organizacional, el análisis debe ser organizado y proactivo, permitiendo a la organización reconocer cualquier cambio en las tareas y determinar la naturaleza de las habilidades que deben estar disponibles para sus empleados (Siddique, 2004).

En segundo lugar, la dotación de personal está relacionada con la atracción de mano de obra calificada que contribuya a aumentar la resiliencia organizacional. La organización debe determinar los recursos de los que dependerá para proporcionar empleados y, en el primer paso, seleccionar empleados que sean flexibles desde el principio (Ho et al., 2014).

En tercer lugar, nuestros hallazgos sugieren que el diseño de la capacitación debe realizarse de manera proactiva y basarse en un análisis de las necesidades de los empleados para ayudarlos a adaptarse y tomar decisiones apropiadas, aumentando así la resiliencia de la fuerza laboral (Lengnick-Hall y Beck, 2011).

Finalmente, para mantener la resiliencia de la fuerza laboral, las empresas deben buscar diseñar un sistema de compensación, ya sea financiero o no financiero, donde la compensación se utilice para recompensar a los empleados por mejorar su desempeño y empoderarlos. Por lo tanto, las empresas están interesadas en mantener la resiliencia de la fuerza laboral y la

satisfacción del empleado, recompensándolos por sus esfuerzos. Como resultado, el sistema de compensación debe mejorar la seguridad laboral para mantener el desempeño de los empleados y, por lo tanto, la resiliencia.

### **6.2.3. Implicaciones para la gestión**

En el Capítulo 5, las herramientas digitales como las plataformas de gestión de proyectos, las herramientas de comunicación virtual y el software de colaboración permiten a los empleados trabajar juntos sin problemas, compartir ideas y contribuir al desarrollo de un nuevo producto o servicio (Zhang et al., 2018). Este enfoque colaborativo fomenta la innovación y la proactividad entre los empleados, generando una dirección empresarial más rápida y a menor costo. Este enfoque iterativo permite a las organizaciones aprender de los fallos, realizar los ajustes necesarios y seguir mejorando su CE.

A través de plataformas digitales como las redes sociales y los sitios web corporativos, las organizaciones pueden comunicar sus iniciativas de RSE, compartir avances y resultados e interactuar con las partes interesadas de manera transparente e interactiva. La integración de DT promueve una mayor responsabilidad social corporativa, mejorando el desarrollo y la motivación de los empleados y aliviando la duplicación de esfuerzos en tareas específicas.

Además, las organizaciones pueden utilizar la DT para participar en la innovación social y abordar los desafíos sociales a través de la responsabilidad social corporativa. Las organizaciones pueden utilizar la TD para desarrollar productos o servicios innovadores que aborden cuestiones sociales como la pobreza, la desigualdad, la salud o la educación (George et al., 2021). Estas iniciativas de innovación social no solo mejoran la sociedad, sino que también mejoran la reputación y la resiliencia de la organización al demostrar su compromiso con la responsabilidad social corporativa y las capacidades dinámicas. Mackey et al. (2014) señalan que la DT permite a las organizaciones mejorar la transparencia, la rendición de cuentas y el compromiso de las partes interesadas, lo que a su vez contribuye a la RSE o a través de ella.

Esto significa que las pymes deben trabajar en una digitalización responsable. Además, Sodhi y Tang (2019) afirman que las herramientas digitales para la gestión de la cadena de suministro pueden respaldar prácticas sostenibles y mejorar la responsabilidad social corporativa.

Incorporar iniciativas de RSE en su EC puede generar varios beneficios que mejoran: En primer lugar, las iniciativas de RSE que están alineadas con la orientación empresarial de las

organizaciones pueden impulsar la innovación. Por ejemplo, las organizaciones que priorizan la RSE pueden invertir en investigación y desarrollo para encontrar soluciones innovadoras que aborden cuestiones sociales o ambientales (Asongu, 2007). Esta innovación puede no solo beneficiar a la sociedad, sino que también puede mejorar la ventaja competitiva de la organización y su capacidad para adaptarse a la dinámica cambiante del mercado, contribuyendo así a la IO.

En segundo lugar, las iniciativas de RSE alineadas con la CE pueden fortalecer las relaciones con las partes interesadas. Las organizaciones que participan en actividades de RSE demuestran su compromiso con las preocupaciones sociales y ambientales, lo que puede mejorar la confianza y la buena voluntad entre las partes interesadas, como clientes, empleados, inversores y comunidades (Esen, 2013). Las relaciones sólidas con las partes interesadas pueden brindar a las organizaciones apoyo y recursos durante tiempos difíciles, como crisis o interrupciones, mejorando las oportunidades comerciales. Por lo tanto, la resiliencia debe seguir a los logros empresariales, que a su vez mejoran la resiliencia empresarial en las pymes (Duchek, 2020).

En tercer lugar, las iniciativas de RSE alineadas con la educación continua pueden contribuir al aprendizaje y la cultura organizacional. Las organizaciones que priorizan la RSE pueden crear una cultura de aprendizaje, experimentación y mejora continua, fomentando una mentalidad emprendedora y agilidad (Esen, 2013). Estas organizaciones pueden adaptarse mejor a las circunstancias cambiantes, aprender de los fracasos y responder proactivamente a los desafíos, mejorando las oportunidades de negocio. Por tanto, es necesaria una digitalización responsable para mejorar el espíritu empresarial y, por tanto, la resiliencia de las organizaciones, especialmente las PYMES.

Finalmente, las iniciativas de RSE alineadas con la CE también pueden mejorar la reputación y la imagen de marca de las organizaciones. Las organizaciones que demuestran un compromiso con la responsabilidad social y las organizaciones de empleadores tienen más probabilidades de ser consideradas socialmente responsables, éticas y dignas de confianza por sus partes interesadas y la sociedad (De Roeck & Farooq, 2017). Una reputación y una imagen de marca positivas pueden contribuir al OR al mantener la participación de mercado, la lealtad de los clientes y el apoyo de las partes interesadas de una organización, incluso en tiempos turbulentos.

En conclusión, alinear las iniciativas de RSE y responsabilidad social, aunque parezca básico, es una forma eficaz de mejorar. Esta interacción dinámica impulsa la innovación, fomenta relaciones sólidas con las partes interesadas, fomenta una cultura de aprendizaje permanente y mejora la reputación y el valor de la marca. Al integrar perfectamente los esfuerzos de RSE en el tejido de los esfuerzos empresariales, las empresas se permiten adoptar la adaptabilidad, fomentar la innovación y cumplir con sus responsabilidades sociales. Esta sinergia estratégica no solo mejora la resiliencia sino que también posiciona a las empresas como actores sostenibles, capaces de afrontar los cambios en el panorama empresarial contemporáneo.

### **6.3. LIMITACIONES DEL TRABAJO DE INVESTIGACIÓN**

A continuación, en este apartado, reflexionamos sobre algunas de las principales limitaciones del trabajo de investigación realizado.

En primer lugar, el estudio utiliza un diseño transversal, lo que limita la capacidad de establecer relaciones causales entre variables. Nuestro enfoque ha intentado reducir la magnitud de este problema basándose en evidencia teórica (Katsikeas y Morgan, 1994). Por lo tanto, pueden ser necesarios estudios longitudinales para investigar la relación entre estas variables a lo largo del tiempo (Xu et al., 2023; Yang y Han, 2023). Además, la resiliencia organizacional es una construcción compleja que puede tardar en emerger. Por lo tanto, son necesarios estudios longitudinales que examinen los efectos a largo plazo de la transformación digital, el aprendizaje organizacional, la innovación, la RSE y el emprendimiento y proporcionarán evidencia más sólida. Además, otras variables pueden mediar o moderar la relación entre estas variables y la resiliencia organizacional a medida que investigaciones futuras puedan explorar estas variables para comprender mejor los mecanismos subyacentes.

En segundo lugar, debido a nuestra dependencia de cuestionarios de estudio anónimos, esta tesis se basó en las interpretaciones individuales de los encuestados (Gosling et al., 2004), porque garantizar el anonimato puede reducir el sesgo de estos datos autoinformados incluso cuando las preguntas son sensibles a cuestiones importantes para la organización (Johns, 1994). Además, aunque a menudo son preferibles las medidas objetivas, el estudio hizo un uso extensivo de medidas autoinformadas de variables clave. Aunque la mayoría de las medidas creadas para el estudio tenían indicadores bastante simples, no pudimos recopilar suficientes datos para poder proporcionar una imagen más completa de todas las variables. Utilice también medidas de variables dependientes e independientes de diferentes fuentes en estudios futuros para reducir los efectos de cualquier sesgo de respuesta (Furnham, 1986; Podsakoff et al., 2003). En tercer lugar, los resultados no son generalizables a todos los tipos de organizaciones o industrias. Es posible que la investigación deba centrarse en contextos y entornos específicos y en una muestra más amplia; Nos centramos en las pymes de una provincia, Andalucía y



también de Palestina, lo que dificulta la generalización de nuestros hallazgos a todos los países y sectores, así como a las grandes empresas. Fomentamos que futuros estudios analicen diferentes tipos y niveles de variables estudiadas en sectores más amplios y en grandes empresas multinacionales.

En el Capítulo Tres, la mini revisión afirma que los resultados limitados disponibles actualmente no permiten un meta análisis sistemático. Esta limitación indica que las conclusiones extraídas de la revisión se basan en un conjunto más pequeño de estudios, que pueden no reflejar el alcance completo de la relación entre las tecnologías digitales, la orientación empresarial y la resiliencia organizacional. Generalizabilidad Los hallazgos discutidos en el artículo pueden tener una generalización limitada debido al contexto específico del que fueron extraídos.

#### **6.4. FUTURAS LÍNEAS DE INVESTIGACIÓN**

Las investigaciones futuras deberían analizar la mejor manera de equilibrar el uso de tecnologías digitales con los cambios resultantes en la cultura y el desempeño de las organizaciones. El desarrollo de herramientas digitales tendrá impactos significativos en el trabajo y las organizaciones. Por ejemplo, la aparición del aprendizaje automático, las redes sociales y la inteligencia artificial y su integración en el sistema empresarial de una organización tendrá un impacto relevante en el aprendizaje y la innovación organizacionales. Esta oportunidad de investigación promete conectar múltiples áreas en la literatura sobre transformación digital. En segundo lugar, futuras investigaciones podrían explorar cómo las empresas pueden mejorar la toma de decisiones apoyándose en las tecnologías digitales. Investigar el papel de las herramientas de diseño digital en la remodelación del mercado competitivo y la resiliencia corporativa.

Las investigaciones futuras deberían considerar la realización de estudios longitudinales para examinar los efectos a largo plazo de las tecnologías digitales en la orientación empresarial y la resiliencia organizacional. Esto proporcionará una comprensión más profunda de la naturaleza dinámica de estas relaciones y los cambios que ocurren con el tiempo. Además del análisis multi nivel. Si bien el enfoque de este artículo se centró en el nivel organizacional, futuras investigaciones podrían explorar el papel de las tecnologías digitales en la mejora de la orientación empresarial y la resiliencia organizacional en diferentes niveles, como el de equipo o el individual. Comprender los mecanismos y las interacciones a diferentes niveles proporcionaría una visión más completa del impacto de las tecnologías digitales.

Además, futuras investigaciones podrían explorar los factores mediadores y moderadores que influyen en la relación entre las tecnologías digitales, la orientación empresarial y la

resiliencia organizacional. Factores como la cultura organizacional, los estilos de liderazgo y las condiciones ambientales externas pueden moldear los resultados de estas relaciones y requieren más investigación.

Estudios futuros podrían investigar los mecanismos a través de los cuales la responsabilidad social, el desarrollo de habilidades y la tutoría empresarial mejoran las oportunidades de empleo (Esposito y Ricci, 2020; Cardinali y De Giovanni, 2022; Xu et al., 2023). También sería útil examinar el papel del liderazgo en la promoción de la responsabilidad social y el desarrollo empresarial y la tutoría en la promoción de la IO (Ciasullo et al., 2022; Guan et al., 2022). Además, investigaciones futuras podrían investigar los factores culturales y contextuales que influyen en la adopción y eficacia de la RSE, la DT y la CE para mejorar la OR (Bai et al., 2021; Martín-Rojas et al., 2023; Santos et al., 2023). Finalmente, la investigación podría explorar los efectos moderadores del tamaño de la organización, la industria y la ubicación geográfica sobre la relación entre RSE, DT, CE y OR.

En general, se necesita más investigación para comprender el complejo proceso a través del cual se producen relaciones directas e indirectas entre RSE, DT, CE y OR en las PYME.

Además, las investigaciones futuras deberían considerar la contribución potencial del entorno de trabajo flexible, el empoderamiento de los empleados y otras mejores prácticas de recursos humanos a la resiliencia. Los estudios empíricos de los efectos de interacción de las prácticas de recursos humanos, en particular, ayudarán a detallar más el proceso a través del cual las PRH contribuyen a la resiliencia organizacional. Las investigaciones futuras pueden incluir el estudio de empresas de diferentes sectores con un tamaño de muestra mayor. Finalmente, otras líneas de investigación adicionales pueden incluir diferentes países y otras empresas que complementarán esta investigación. Esto permitiría analizar las diferencias entre países y sectores, y su impacto en la resiliencia regulatoria.

## **6.5. BIBLIOGRAFÍA**

- Albrecht, S. L., Bakker, A. B., Gruman, J. A., Macey, W. H., & Saks, A. M. (2015). Employee engagement, human resource management practices and competitive advantage. *Journal of Organizational Effectiveness*, 2(1), 7–35. <https://doi.org/10.1108/joepp-08-2014-0042>
- Anthony, W.P., Kacmar, K.M. and Perrewe, P.L. (2002) Human Resource Management: A Strategic Approach, 4th edn. New York: South-Western.

- Armstrong, M., & Taylor, S. (2020). *Armstrong's Handbook of Human Resource Management Practice* (15th ed.). Kogan Page.
- Asongu, J. J. (2007). Innovation as an argument for corporate social responsibility. *Journal of Business and Public Policy*, 1(3), 1–20. <http://www.foretica.org/wp-content/uploads/2016/01/Innovation.pdf>
- Bai, C., Quayson, M., & Sarkis, J. (2021). COVID-19 pandemic digitization lessons for sustainable development of micro-and small- enterprises. *Sustainable Production and Consumption*, 27, 1989–2001. <https://doi.org/10.1016/j.spc.2021.04.035>
- Bertolino, M., Truxillo, D. M., & Fraccaroli, F. (2011). Age as moderator of the relationship of proactive personality with training motivation, perceived career development from training, and training behavioral intentions. *Journal of Organizational Behavior*, 32(2), 248–263. <https://doi.org/10.1002/job.670>
- Bharadwaj, A., Sawy, O. a. E., Pavlou, P. A., & Venkatraman, N. (2013). Digital Business Strategy: Toward a next generation of insights. *Management Information Systems Quarterly*, 37(2), 471–482. <https://doi.org/10.25300/misq/2013/37:2.3>
- Bolívar–Ramos, M. T., Morales, V. J. G., & García–Sánchez, E. (2012). Technological distinctive competencies and organizational learning: Effects on organizational innovation to improve firm performance. *Journal of Engineering and Technology Management*, 29(3), 331–357. <https://doi.org/10.1016/j.jengtecman.2012.03.006>
- Bouaziz, F., & Hachicha, Z. S. (2018). Strategic human resource management practices and organizational resilience. *Journal of Management Development*, 37(7), 537–551. <https://doi.org/10.1108/jmd-11-2017-0358>
- Cardinali, P. G., & De Giovanni, P. (2022). Responsible digitalization through digital technologies and green practices. *Corporate Social Responsibility and Environmental Management*, 29(4), 984–995. <https://doi.org/10.1002/csr.2249>
- Cefis, E., & Marsili, O. (2005). A matter of life and death: innovation and firm survival. *Industrial and Corporate Change*, 14(6), 1167–1192. <https://doi.org/10.1093/icc/dth081>
- Ciasullo, M. V., Montera, R., & Douglas, A. (2022). Building SMEs' resilience in times of uncertainty: the role of big data analytics capability and co-innovation. *Transforming Government: People, Process and Policy*, 16(2), 203–217. <https://doi.org/10.1108/tg-07-2021-0120>
- Crichton, M., Ramsay, C. G., & Kelly, T. (2009). Enhancing Organizational Resilience Through Emergency Planning: Learnings from Cross-Sectoral Lessons. *Journal of Contingencies*

- and Crisis Management*, 17(1), 24–37.  
<https://doi.org/10.1111/j.1468-5973.2009.00556.x>
- De Roeck, K., & Farooq, O. (2017). Corporate social responsibility and ethical leadership: Investigating their interactive effect on employees' socially responsible behaviors. *Journal of Business Ethics*, 151(4), 923–939.  
<https://doi.org/10.1007/s10551-017-3656-6>
- Duchek, S. (2019). Organizational resilience: a capability-based conceptualization. *Business Research*, 13(1), 215–246. <https://doi.org/10.1007/s40685-019-0085-7>
- Elia, G., Margherita, A., & Passiante, G. (2020). Digital entrepreneurship ecosystem: How digital technologies and collective intelligence are reshaping the entrepreneurial process. *Technological Forecasting and Social Change*, 150, 119791.  
<https://doi.org/10.1016/j.techfore.2019.119791>
- Esen, E. (2013). The influence of corporate social responsibility (CSR) activities on building corporate reputation. In *Advances in sustainability and environmental justice* (pp. 133–150). [https://doi.org/10.1108/s2051-5030\(2013\)0000011010](https://doi.org/10.1108/s2051-5030(2013)0000011010)
- Esposito, P., & Ricci, P. (2020). Cultural organizations, digital corporate social responsibility and stakeholder engagement in virtual museums: a multiple case study. How digitization is influencing the attitude toward CSR. *Corporate Social Responsibility and Environmental Management*, 28(2), 953–964. <https://doi.org/10.1002/csr.2074>
- Furnham, A. (1986). Response bias, social desirability and dissimulation. *Personality and Individual Differences*, 7(3), 385–400. [https://doi.org/10.1016/0191-8869\(86\)90014-0](https://doi.org/10.1016/0191-8869(86)90014-0)
- George, G., Merrill, R. K., & Schillebeeckx, S. J. (2020). Digital Sustainability and Entrepreneurship: How digital innovations are helping tackle climate change and sustainable development. *Entrepreneurship Theory and Practice*, 45(5), 999–1027.  
<https://doi.org/10.1177/1042258719899425>
- Gosling, S. D., Vazire, S., Srivastava, S., & John, O. P. (2004). Should we trust web-based studies? A comparative analysis of six preconceptions about internet questionnaires. *American Psychologist*, 59(2), 93–104. <https://doi.org/10.1037/0003-066x.59.2.93>
- Guan, F., Wang, T., & Tang, L. (2022). Organizational resilience under COVID-19: the role of digital technology in R&D investment and performance. *Industrial Management and Data Systems*, 123(1), 41–63. <https://doi.org/10.1108/imds-04-2022-0220>
- Hervé, A., Schmitt, C., & Baldegger, R. (2020). Digitalization, entrepreneurial orientation & internationalization of micro, small and medium-sized enterprises. *Technology Innovation Management Review*, 10(4), 5–17. <https://doi.org/10.22215/timreview/1343>

- Ho, G. K. S., Lam, C. Y. T., & Law, R. (2022). Conceptual framework of strategic leadership and organizational resilience for the hospitality and tourism industry for coping with environmental uncertainty. *Journal of Hospitality and Tourism Insights*, 6(2), 835–852. <https://doi.org/10.1108/jhti-09-2021-0242>
- Holzmann, P., & Gregori, P. (2023). The promise of digital technologies for sustainable entrepreneurship: A systematic literature review and research agenda. *International Journal of Information Management*, 68, 102593. <https://doi.org/10.1016/j.ijinfomgt.2022.102593>
- İyigün, N. Ö. (2015). What could entrepreneurship do for sustainable development? A corporate social responsibility-based approach. *procedia — Social and Behavioral Sciences*, 195, 1226–1231. <https://doi.org/10.1016/j.sbspro.2015.06.253>
- Jean, R. “., Kim, D., Zhou, K. Z., & Çavuşgil, S. T. (2021). E-platform use and exporting in the context of Alibaba: A signaling theory perspective. *Journal of International Business Studies*, 52(8), 1501–1528. <https://doi.org/10.1057/s41267-020-00396-w>
- Johns, G. (1994). How often were you absent? A review of the use of self-reported absence data. *Journal of Applied Psychology*, 79(4), 574–591. <https://doi.org/10.1037/0021-9010.79.4.574>
- Kane, G. C. (2019, January 1). *How digital leadership is(n't) different*. Northwestern Scholars. <https://www.scholars.northwestern.edu/en/publications/how-digital-leadership-isnt-different>
- Katsikeas, C. S., & Morgan, R. E. (1994). Differences in perceptions of exporting problems based on firm size and export market experience. *European Journal of Marketing*, 28(5), 17–35. <https://doi.org/10.1108/03090569410062014>
- Kraaijenbrink, J., Spender, J., & Groen, A. J. (2009). The resource-based view: A review and assessment of its critiques. *Journal of Management*, 36(1), 349–372. <https://doi.org/10.1177/0149206309350775>
- Kuntz, J., Malinen, S., & Näswall, K. (2017). Employee resilience: Directions for resilience development. *Consulting Psychology Journal: Practice and Research*, 69(3), 223–242. <https://doi.org/10.1037/cpb0000097>
- Lane, T., Armin, J., & Gordon, J. S. (2015). Online recruitment methods for web-based and mobile health studies: A review of the literature. *Journal of Medical Internet Research*, 17(7), e183. <https://doi.org/10.2196/jmir.4359>

- Lee, A. V., Vargo, J. J., & Seville, E. (2013). Developing a tool to measure and compare organizations' resilience. *Natural Hazards Review*, 14(1), 29–41. [https://doi.org/10.1061/\(asce\)nh.1527-6996.0000075](https://doi.org/10.1061/(asce)nh.1527-6996.0000075)
- Lengnick-Hall, C. A., Beck, T. E., & Lengnick-Hall, M. L. (2011). Developing a capacity for organizational resilience through strategic human resource management. *Human Resource Management Review*, 21(3), 243–255. <https://doi.org/10.1016/j.hrmr.2010.07.001>
- Liu, H., Wei, S., Ke, W., Wei, K. K., & Hua, Z. (2016). The configuration between supply chain integration and information technology competency: A resource orchestration perspective. *Journal of Operations Management*, 44(1), 13–29. <https://doi.org/10.1016/j.jom.2016.03.009>
- Lumpkin, G. T., & Dess, G. G. (1996). Clarifying the entrepreneurial orientation construct and linking it to performance. *Academy of Management Review*, 21(1), 135. <https://doi.org/10.2307/258632>
- Mackey, J. D., Frieder, R. E., Perrewé, P. L., Gallagher, V. C., & Brymer, R. A. (2014). Empowered employees as social deviants: The role of Abusive supervision. *Journal of Business and Psychology*, 30(1), 149–162. <https://doi.org/10.1007/s10869-014-9345-x>
- Manetti, G., & Bellucci, M. (2016). The use of social media for engaging stakeholders in sustainability reporting. *Accounting, Auditing & Accountability*, 29(6), 985–1011. <https://doi.org/10.1108/aaaj-08-2014-1797>
- Migdadi, M. M. (2019). Organizational learning capability, innovation and organizational performance. *European Journal of Innovation Management*, 24(1), 151–172. <https://doi.org/10.1108/ejim-11-2018-0246>
- Nambisan, S., Wright, M., & Feldman, M. P. (2019). The digital transformation of innovation and entrepreneurship: Progress, challenges and key themes. *Research Policy*, 48(8), 103773. <https://doi.org/10.1016/j.respol.2019.03.018>
- Newbert, S. L. (2008). Value, rareness, competitive advantage, and performance: a conceptual-level empirical investigation of the resource-based view of the firm. *Strategic Management Journal*, 29(7), 745–768. <https://doi.org/10.1002/smj.686>
- Noble, C. H. (2008). The influence of job security on field sales manager satisfaction: Exploring frontline tensions. *Journal of Personal Selling and Sales Management*, 28(3), 247–261. <https://doi.org/10.2753/pss0885-3134280303>

- Pangastuti, P. a. D., Sukirno, S., & Efendi, R. (2020). The effect of work motivation and compensation on employee performance. *International Journal of Multicultural and Multireligious Understanding*, 7(3), 292–299. <https://doi.org/10.18415/ijmmu.v7i3.1534>
- Pavlou, P. A., & Sawy, O. a. E. (2011). Understanding the elusive black box of dynamic capabilities. *Decision Sciences*, 42(1), 239–273. <https://doi.org/10.1111/j.1540-5915.2010.00287.x>
- Pesce, D., Neirotti, P., & Paolucci, E. (2019). When culture meets digital platforms: value creation and stakeholders' alignment in big data use. *Current Issues in Tourism*, 22(15), 1883–1903. <https://doi.org/10.1080/13683500.2019.1591354>
- Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879–903. <https://doi.org/10.1037/0021-9010.88.5.879>
- Raj, A., Mukherjee, A. A., De Sousa Jabbour, A. B. L., & Srivastava, S. K. (2022). Supply chain management during and post-COVID-19 pandemic: Mitigation strategies and practical lessons learned. *Journal of Business Research*, 142, 1125–1139. <https://doi.org/10.1016/j.jbusres.2022.01.037>
- Rauch, A., Wiklund, J., Lumpkin, G. T., & Fresé, M. (2009). Entrepreneurial orientation and business performance: An assessment of past research and suggestions for the future. *Entrepreneurship Theory and Practice*, 33(3), 761–787. <https://doi.org/10.1111/j.1540-6520.2009.00308.x>
- Rauch, S., Jasny, E., Schmidt, K. E., & Petsch, B. (2018). New vaccine technologies to combat outbreak situations. *Frontiers in Immunology*, 9. <https://doi.org/10.3389/fimmu.2018.01963>
- Rojas, R. M., Garrido-Moreno, A., & Morales, V. J. G. (2023). Social media use, corporate entrepreneurship and organizational resilience: A recipe for SMEs success in a post-Covid scenario. *Technological Forecasting and Social Change*, 190, 122421. <https://doi.org/10.1016/j.techfore.2023.122421>
- Santos, S. C., Liguori, E. W., & Garvey, E. M. (2023). How digitalization reinvented entrepreneurial resilience during COVID-19. *Technological Forecasting and Social Change*, 189, 122398. <https://doi.org/10.1016/j.techfore.2023.122398>
- Schallmo, D. R. A., Williams, C. A., & Lohse, J. (2019). Digital strategy: Integrated approach and generic options. *International Journal of Innovation Management*, 23(08), 1940005. <https://doi.org/10.1142/s136391961940005x>

- Si, S., Hall, J., Suddaby, R., Ahlström, D., & Jiang, W. (2023). Technology, entrepreneurship, innovation and social change in digital economics. *Technovation*, *119*, 102484. <https://doi.org/10.1016/j.technovation.2022.102484>
- Siddique, C. M. (2004). Job analysis: a strategic human resource management practice. *International Journal of Human Resource Management*, *15*(1), 219–244. <https://doi.org/10.1080/0958519032000157438>
- Singh, S. K. (2008). Role of leadership in knowledge management: a study. *Journal of Knowledge Management*, *12*(4), 3–15. <https://doi.org/10.1108/13673270810884219>
- Sodhi, M. S., & Tang, C. S. (2019). Research opportunities in supply chain transparency. *Production and Operations Management*, *28*(12), 2946–2959. <https://doi.org/10.1111/poms.13115>
- Soltanifar, M., & Smailhodžić, E. (2020). Developing a digital entrepreneurial mindset for Data-Driven, Cloud-Enabled, and Platform-Centric business activities: practical implications and the impact on society. In *Future of Business and Finance* (pp. 3–21). [https://doi.org/10.1007/978-3-030-53914-6\\_1](https://doi.org/10.1007/978-3-030-53914-6_1)
- Spencer, D. A. (2016). Work in and beyond the second machine age: the politics of production and digital technologies. *Work, Employment and Society*, *31*(1), 142–152. <https://doi.org/10.1177/0950017016645716>
- Tees, S., Özçetin, Y. S. Ü., & Russell-Westhead, M. (2016). Workplace violence experienced by nursing students: A UK survey. *Nurse Education Today*, *41*, 30–35. <https://doi.org/10.1016/j.nedt.2016.03.014>
- Troise, C., & Camilleri, M. A. (2021). The use of digital media for marketing, CSR communication and stakeholder engagement. In *Emerald Publishing Limited eBooks* (pp. 161–174). <https://doi.org/10.1108/978-1-80071-264-520211010>
- Vega-Jurado, J., Gutiérrez-Gracia, A., & Fernández-De-Lucio, I. (2009). Does external knowledge sourcing matter for innovation? Evidence from the Spanish manufacturing industry. *Industrial and Corporate Change*, *18*(4), 637–670. <https://doi.org/10.1093/icc/dtp023>
- Wang, C., Pan, R., Wan, X., Tan, Y., Xu, L., McIntyre, R. S., Sum, F. N. C. Y., Tran, B. X., Ho, R., Sharma, V. K., & Ho, C. S. (2020). A longitudinal study on the mental health of general population during the COVID-19 epidemic in China. *Brain, Behavior, and Immunity*, *87*, 40–48. <https://doi.org/10.1016/j.bbi.2020.04.028>



- Wang, J., Hutchins, H. M., & Garavan, T. N. (2009). Exploring the strategic role of human resource development in organizational crisis management. *Human Resource Development Review*, 8(1), 22–53. <https://doi.org/10.1177/1534484308330018>
- Wang, W. Y. C., & Wang, Y. (2020). Analytics in the era of big data: The digital transformations and value creation in industrial marketing. *Industrial Marketing Management*, 86, 12–15. <https://doi.org/10.1016/j.indmarman.2020.01.005>
- Winter, S. G. (2003). Understanding dynamic capabilities. *Strategic Management Journal*, 24(10), 991–995. <https://doi.org/10.1002/smj.318>
- Woolley, A. W., Chabris, C. F., Pentland, A., Hashmi, N., & Malone, T. W. (2010). Evidence for a collective intelligence factor in the performance of human groups. *Science*, 330(6004), 686–688. <https://doi.org/10.1126/science.1193147>
- Xu, Q., Li, X., & Guo, F. (2023). Digital transformation and environmental performance: Evidence from Chinese resource-based enterprises. *Corporate Social Responsibility and Environmental Management*, 30(4), 1816–1840. <https://doi.org/10.1002/csr.2457>
- Yang, Y., & Han, J. (2023). Digital transformation, financing constraints, and corporate environmental, social, and governance performance. *Corporate Social Responsibility and Environmental Management*, 30(6), 3189–3202. <https://doi.org/10.1002/csr.2546>
- Zhang, Y., Sun, J., Yang, Z., & Wang, Y. (2018). Mobile social media in inter-organizational projects: Aligning tool, task and team for virtual collaboration effectiveness. *International Journal of Project Management*, 36(8), 1096–1108. <https://doi.org/10.1016/j.ijproman.2018.09.003>

