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International knowledge transfer through international entrepreneurship: A systematic review and research agenda

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Abstract

We conducted a systematic literature review on international knowledge transfer (IKT) via international entrepreneurship (IE), synthesising fragmented research that employs various conceptualisations, methodological approaches and theoretical lenses. Based on a review of 40 articles, we inductively developed an analytical framework comprising four key elements: international knowledge, international knowledge agents, IKT processes and outcomes. Our review identifies three dominant types of international knowledge agents in IE: returnee entrepreneurs, transnational entrepreneurs and international corporate entrepreneurs who actively engage in IKT. Three distinctive IKT processes emerge: one-way knowledge transfer, two-way knowledge transfer and interactive knowledge transfer, which result in outcomes at individual, organisational, regional and national levels, as well as at their intersections. Guided by this framework, we identify and analyse key research themes, highlighting main methodological and theoretical approaches, and revealing significant gaps and inconsistencies. Our paper advances knowledge on IKT via IE by developing an integrated framework that provides conceptual clarity and a cohesive understanding of this intentional, systematic, outcomeoriented process. Our analytical framework facilitates the identification of future research directions along the dimensions of 5Cs: complementarity of knowledge, (re-)contextualisation of knowledge, connectivity of knowledge, community capitalism and cross-disciplinary research.

INTRODUCTION

The international business landscape is shaped by volatility, uncertainty, complexity and ambiguity, requiring mechanisms that provide innovation and collaboration necessary to address complex and interconnected challenges, including natural disasters, political conflicts and

economic shifts (Verbeke et al., 2021). Against this backdrop, international entrepreneurship (IE), encompassing innovative, proactive and risk-taking endeavours that transcend borders, continues to generate value for businesses, economies and societies (McDougall & Oviatt, 2000). IE has an influence on business ecosystems at all levels of agglomeration (i.e. regional, national and global) and plays

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a pivotal role in creating opportunities for growth, fostering resilience and instigating positive changes to achieve Sustainable Development Goals (SDGs) (United Nations, 2015; Zahra, 2021; Zucchella, 2021).

Central to IE is its capacity to facilitate international knowledge transfer (IKT) - transferring knowledge across borders, which is crucial for enhancing entrepreneurial competences, organisational capabilities and firm performance (De Clercq et al., 2012; Reuber et al., 2018). Although knowledge is firmly rooted in specific geographical locations (Hannigan et al., 2015), IE has the capacity to break through geographical boundaries to transfer knowledge on an international scale. The relationship between IKT and IE has attracted growing interest, particularly following seminal work of Drori et al. (2009) that highlights the pivotal role of transnational entrepreneurship in facilitating cross-border knowledge flows.

Since then, studies have shed light on IKT via IE across different contexts, for example within the European network (Grodek-Szostak et al., 2020) or Balkan countries (Tekin et al., 2021), from western developed countries to emerging economies in Africa (Ojo, 2017) or Asia (Liu et al., 2015), thereby facilitating learning (Lee et al., 2020), knowledge adaptation (Hughes et al., 2020) and interactive knowledge transfer (Alonso-Martínez et al. 2021)). However, despite the growing attention to this topic, the literature is notably fragmented, with studies often focusing on isolated aspects of IKT via IE and using different theories. For example, Lin et al. (2016), using social network theory, identify the unidirectional flow of knowledge, where returnee entrepreneurs transfer existing knowledge from host to home countries. Craiut et al. (2022), applying a combination of dynamic capabilities view, institutional theory and learning theory, explore the bidirectional flow of knowledge between two international entities, highlighting the mutual benefits and shared learning from these exchanges. Alonso-Martínez et al. (2021), employing social capital theory, reveal that new knowledge can be created through dynamic exchange activities via IE. Although all three studies focus on the processes and outcomes of IKT via IE, they are based on different theoretical perspectives and emphasise different directions of knowledge flow, and varying outcomes. These varied approaches and findings highlight the lack of, and the need for, a cohesive framework that integrates the different dimensions of IKT and IE.

Further, existing systematic literature reviews on either IKT or IE have often overlooked the role of each other in their respective processes. As an important element of IE, IKT including knowledge transfer agents and knowledge transfer processes should constitute a main building block of the IE literature. Yet, existing review papers on IE (e.g. Ahsan & Fernhaber, 2019; Drori et al., 2009; Keupp

& Gassmann, 2009; Nave & Ferreira, 2022; Romanello & Chiarvesio, 2019; Terjesen et al., 2016) have not considered IKT as a main research theme, hindering our understanding of the antecedents of IE. Conversely, review papers on IKT (e.g. Bengoa et al., 2021; Castro & Moreira, 2023; Ferreira et al., 2022; Gaur et al., 2019; Noh & Lee, 2019; Singh & Dhir, 2024) rarely consider the role of IE. The two parallel but relevant research streams indicate a significant research gap: the intersection of IKT and IE has been under-explored, despite the contribution of IKT via IE to the enrichment of local, regional, national and global business, as well as social and economic landscapes (e.g. Ferreira et al., 2020; Gharagozloo et al., 2022).

Our paper addresses this research gap by conducting a systematic literature review and developing an analytical framework encompassing the following: (i) international knowledge; (ii) international knowledge agents (returnee entrepreneurs, transnational entrepreneurs, international corporate entrepreneurs); (iii) IKT processes (one-way, two-way, interactive) and (iv) outcomes. Our analytical framework encompasses inputs (international knowledge, international knowledge agents), mediators (IKT processes) and outcomes of IKT via IE. Our framework yields avenues for research along five dimensions (5Cs): (i) complementarity of knowledge, (ii) (re-)contextualisation of knowledge, (iii) connectivity of knowledge, (iv) community capitalism and (v) cross-disciplinary research.

Our paper aligns closely with the Special Issue Call for Papers: Entrepreneurship as an Academic Field: Taking Stock and New Directions, which highlights four problems with the existing entrepreneurship studies. Related to Problem 1, on the need for definition and measurement to understand the phenomenon and the appropriate units of analysis, our critical analysis of IKT and IE definitions clarifies conceptual ambiguities and fosters a more cohesive comprehension of these concepts. In connection with Problem 2, on the lack of understanding of the entrepreneurial process, we consider the intersection of IE and IKT processes, enriching the discussion on how entrepreneurship acts as a vehicle for IKT. We address Problem 3 on the 'relative' performance outcomes of entrepreneurship by systematically categorising and analysing the outcomes of IKT via IE at the individual, organisational, regional and national levels. Therefore, our paper highlights how IKT through IE impacts business, the economy and society at multiple levels. Finally, echoing Problem 4 regarding the lack of novel cross-disciplinary approaches, our review demonstrates the necessity of a holistic approach to capture the full spectrum of factors influencing IKT via IE. This cross-disciplinary focus is essential for developing the robust theoretical frameworks and practical solutions that can effectively tackle

grand challenges and contribute to SDGs. Our review thus provides a foundation for further theorising, empirical research and academic discourse on IKT via IE.

We begin by reviewing the definitions of IKT and IE in the extant literature, followed by our methodological approach for identifying and analysing 40 selected articles. We then present a descriptive analysis of the sample. Our findings address definitional issues, methodological approaches and content analysis. We introduce an analytical framework for IKT via IE, outline three emerging research themes and propose future research directions for advancing this field.

CONCEPTUALISING IKT AND IE

IKT

In the broader management literature, knowledge transfer is defined as a process where one entity (individual, team, organisation or inter-organisational network) is affected by the experience of another (Argote & Ingram, 2000; De Silva et al., 2023; Inkpen & Tsang, 2005). This definition highlights the fact that knowledge transfer is dynamic and outcome-oriented, involving intentional and systematic interactions and knowledge exchanges that can lead to learning, knowledge adaptation, even knowledge co-creation, resulting in changes in the behaviour, processes or performance of the receiving entity. However, in a cross-border knowledge transfer context (Audretsch & Caiazza, 2016; Crespo et al., 2022), IKT is defined as 'transferring general and specific knowledge regarding foreign cultures, political-social context, and business environments, knowledge of local organisational practices, as well as knowledge of key suppliers and clients' (Lazarova & Cerdin, 2007, p. 422). Recognised as a mechanism of globalisation, IKT has largely been explored in the context of intra-organisational knowledge flows within multinational enterprises (MNEs). This research stream often emphasises IKT between headquarters and foreign subsidiaries, and among subsidiaries in different countries, resulting in several review papers, for example Castro and Moreira (2023), Singh and Dhir (2024), Ferreira et al. (2022) and Gaur et al. (2019). However, IKT via IE involving different entities also deserves focused attention, given the growing significance of IE activities beyond MNEs.

IE

IE was initially conceptualised by McDougall and Oviatt (1997, p. 293) as 'new and innovative activities that

have the goal of value creation and growth in business organisations across national borders'. This definition was then refined as 'a combination of innovative, proactive, and risk-seeking behaviour that crosses national borders and is intended to create value in organizations' (McDougall & Oviatt, 2000, p. 903). These definitions underscore the inherent complexity of IE, where international entrepreneurs must navigate unfamiliar legal, cultural and competitive environments in foreign markets (Reuber et al., 2018). To address these challenges, they must strategically leverage international knowledge through the IKT processes. Despite the significance of the interplay of IKT and IE, existing reviews of IE (e.g. Ahsan & Fernhaber, 2019; Drori et al., 2009; Keupp & Gassmann, 2009; Nave & Ferreira, 2022; Romanello & Chiarvesio, 2019; Terjesen et al., 2016) have not examined this as a core research theme. This paper fills the research gap.

Further, we distinguish IE from other entrepreneurial forms - ethnic entrepreneurship and nomadic entrepreneurship - that do not fully align with the defining attributes of IE, that is innovative, proactive, risk-seeking and value-creation across borders. Ethnic entrepreneurship involves businesses initiated by specific ethnic/immigrant groups, often focusing on community integration or addressing localised needs within ethnic communities (Chaganti & Greene, 2002; Ma et al., 2013). Although such ventures may engage in transnational activities or networks, their primary emphasis is on community-oriented markets rather than global expansion. Nomadic entrepreneurship pertains to entrepreneurial activities driven by lifestyle or necessity, often undertaken by nomads without a deliberate strategy for cross-border market development or long-term expansion (Castellano et al., 2020; R. Smith, 2009). Delineating IE from these forms of entrepreneurship helps to establish a clear conceptual boundary.

IKT and IE

Considering IKT and IE together positions IKT as more than simply knowledge flow from one entity to another across borders; it can involve the active and strategic application and adaptation of international knowledge to align with different country contexts (Tran & Truong, 2022). This intentionality sets apart IKT from international knowledge spillovers (IKS) or diffusion. Specifically, IKT is characterised by the deliberate and strategic dissemination of knowledge aimed at benefiting international knowledge agents, whereas IKS often occurs passively as an unintended byproduct of proximity or interaction (Agarwal et al., 2007; Caiazza et al., 2020; Ghio et al., 2014). This

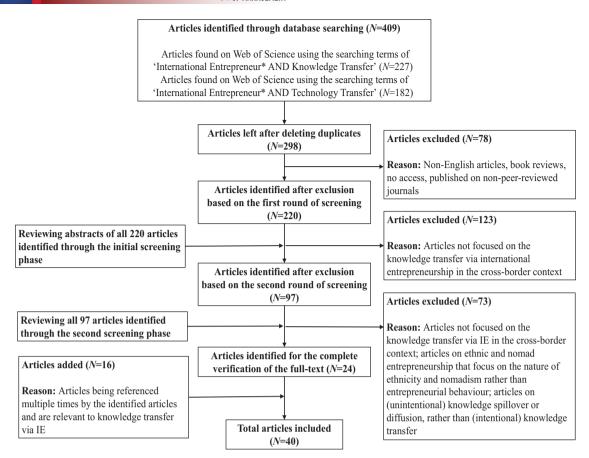


FIGURE 1 Literature selection process: inclusion and exclusion criteria. IE, international entrepreneurship.

distinction serves as the foundation for our inclusion and exclusion criteria, as outlined in the methodology section, ensuring a focused examination of studies that address intentional IKT processes.

METHODOLOGY

We conducted a systematic literature review following the methodologies outlined by Tranfield et al. (2003) to ensure a transparent and replicable process. Our literature search process is summarised in Figure 1. We started by searching databases with a clear conceptual boundary of IKT and IE, as articulated in the previous section, to ensure transparency and rigour (Fan et al., 2022; Hiebl, 2023; Schätzlein et al., 2023). The initial step involved searching the Web of Science for articles published by 1 April 2023 using the search terms 'international entrepreneur* AND knowledge transfer' (resulting in 227 articles) and 'international entrepreneur* AND technology transfer' (resulting in 182 articles), as technology transfer is a significant element of knowledge transfer. After excluding duplicates, book reviews, conference papers, letters, meeting abstracts and non-English publications, we

identified a collection of 220 journal articles in our initial sample.

One of the authors screened the abstracts, identifying 97 potentially relevant to our review. Subsequently, four authors independently analysed these articles, excluding 73 based on the exclusion criteria outlined in the previous section, that is studies focused on ethnic or nomad entrepreneurship or (unintentional) knowledge spillover/diffusion, rather than (intentional) knowledge transfer. This process left 24 articles. Since formal search techniques based on keywords may potentially overlook some relevant studies, we utilised the snowball search technique to examine the bibliographies of 24 journal articles for additional works of relevance (Greenhalgh & Peacock, 2005). We identified a further 16 journal articles. Finally, we conducted an independent search using the same search terms on Google Scholar and found that the top 50 articles by citations overlapped significantly with our 40 articles – our final sample, providing evidence of our robust searches. In June 2024, we conducted an additional round of searches, incorporating new keywords, for example 'outward-looking entrepreneur*' and 'global entrepreneur*', as per reviewers' suggestions. This did not yield additional papers.



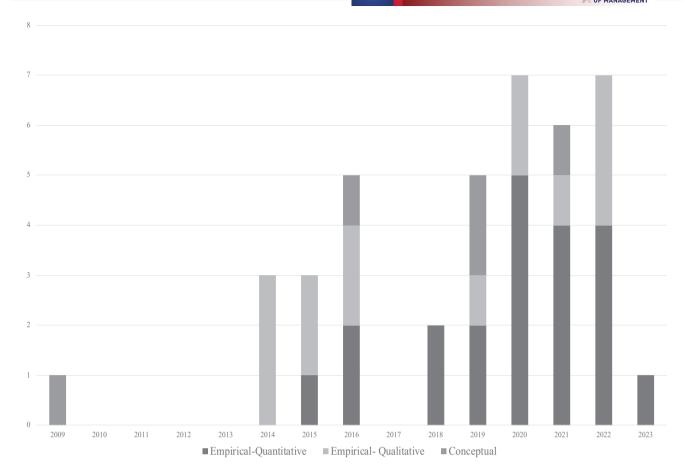


FIGURE 2 International knowledge transfer (IKT) via international entrepreneurship (IE) publications.

Our final sample consists of 40 papers spanning 2009– 2023. Specifically, our search results returned the first two publications on this topic: Drori et al. (2009) and Fernhaber et al. (2009). However, while Drori et al. (2009) meets the inclusion criteria and is identified as the first publication in our sample, Fernhaber et al. (2009) is excluded because its focus is not on IKT directly, but on the source of knowledge (internal or external) and its role in new venture internationalisation. Following the procedures suggested by Rojon et al. (2021) and Denyer & Tranfield (2009), we conducted a descriptive analysis of the publication trends over the years presented in the next section, and a content analysis to draw out key analytical themes.

DESCRIPTIVE ANALYSIS

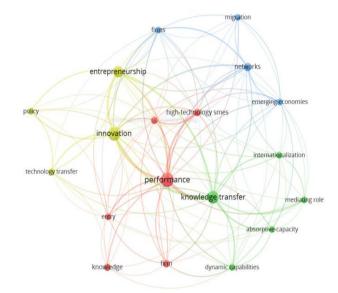
The IKT via IE literature has witnessed growing scholarly interest, as evidenced by a steady increase in publications since 2009 (see Figure 2), following seminal work of Drori et al. (2009). This upward trend highlights the increasing recognition of IKT as a vital area of inquiry within IE research. However, Figure 2 also reveals that contribu-

tions remained relatively sparse during the first 10 years after 2009. Research activity has significantly accelerated since 2019, reflecting a heightened academic focus on this intersection.

The literature has employed a range of methods (e.g. case studies, interviews, surveys and observations). Except for five conceptual and review papers (Ahsan & Fernhaber, 2019; Audretsch & Caiazza, 2016; Bengoa et al., 2021; Drori et al., 2009; Noh & Lee, 2019), out of 35 empirical papers, 21 collected data via online surveys (e.g. Hughes et al., 2020; Lin et al., 2016; Sá and de Pinho, 2019), secondary databases (e.g. Gharagozloo et al., 2022; Hashai & Zahra, 2022) and offline channels (e.g. Gruenhagen, 2021; Liu et al., 2015), while 14 papers employed qualitative approaches (e.g. case study, interview and content analysis).

Nevertheless, research on this topic has been somewhat fragmented. Using VOSviewer, a software tool for constructing and visualising bibliometric networks, we conducted co-word analysis by constructing keyword cooccurrence maps that visualise the relationships and frequencies of keywords within the set of 40 identified studies. Figure 3a,b presents maps based on two different frequency thresholds: keywords appearing at least five

(b) Low-Frenquency Co-Word Analysis (Keywords Appearing at Least Three Times)



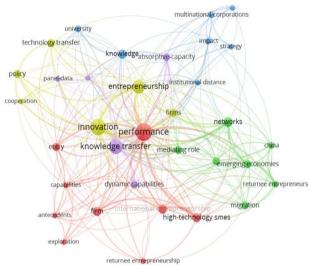


FIGURE 3 Keyword co-occurrence network visualisation of the international knowledge transfer (IKT) via international entrepreneurship (IE) Literature.

times and at least three times, respectively. There is no standard threshold for co-word analysis (see publications on the application of VOSviewer listed on the website). A higher frequency threshold, such as keywords appearing at least five times, ensures that the most prominent keywords are included. In contrast, a lower frequency threshold, such as keywords appearing at least three times, helps capture a broader range of keywords, including less frequently mentioned but potentially significant terms that may reveal emerging themes or underexplored areas. Despite adopting different thresholds, Figure 3a,b does not reveal a clear pattern of dominant keywords or consistent thematic clusters. This fragmentation may also stem from the relatively small sample size and the use of broad keywords, such as 'firm(s)'. Nevertheless, failing to identify clear patterns can be a strong justification for the use of content analysis to identify themes, as this allows for a more nuanced and detailed examination of the articles that goes beyond what automated keyword mapping can reveal.

FINDINGS

Definitional issues

It is crucial to discuss key constructs pertinent to IKT and IE to establish construct equivalence (Barkema et al., 2015; Engelen et al., 2009). Clear definitions enhance the overall quality, accessibility and comparability of academic

papers. Conceptually clarifying the nature of IKT and IE builds the foundation for a more accurate understanding of the nature of the knowledge being transferred across borders that is connected to IE. This process involves translating conceptual definitions that expound on abstract concepts into tangible criteria to establish construct equivalence. Such clarity also helps analyse the distinctive processes of IKT via IE, identify enablers and barriers, and evaluate outcomes of IKT via IE. Figure 4 summarises the papers that explicitly define IKT and/or IE.

Among 40 identified papers, 6 papers explicitly define both; 12 papers explicitly define IKT focusing on the following: (i) technology know-how versus business-related know-how, (ii) local knowledge versus overseas knowledge and (iii) contextualised knowledge versus general knowledge. In addition, 18 papers explicitly define IE, focusing on the following: (i) returnee entrepreneurship, (ii) transnational entrepreneurship and (iii) international corporate entrepreneurship. Below, we discuss these definitional issues.

IKT definitional issues

Out of 40 identified papers, 12 papers that explicitly define IKT predominantly adopt or adapt Lazarova & Cerdin's (2007) definition. Nevertheless, the specific definitions of IKT vary in accordance with research questions. For instance, Hanle et al. (2023, p. 1553) define IKT as 'the transfer of either skills or capabilities (that is, expertise) or

IKT focusing on local knowledge vs. overseas knowledge

Noh & Lee (2019); Yu et al. (2020); Bengoa et al. (2021); Craiut et al. (2022); Tran & Truong (2022)

IKT focusing on specific contextualised knowledge vs. general knowledge

Valk et al. (2015); Crespo et al. (2022); Hanle et al. (2023)

18 papers explicitly defined IE

Returnee entrepreneurship

Drori et al. (2009); Pruthi (2014); Liu et al. (2015); Lin et al. (2016); Ojo (2016); Bai et al. (2018); Gruenhagen (2019); Tran & Truong (2022); Gruenhagen (2021)

Transnational entrepreneurship

Drori et al. (2009); Pehrsson et al. (2015); Valk et al. (2015); Santamaria-Alvarez & Śliwa (2016): Yu et al. (2020): Gharagozloo et al. (2022)

International corporate entrepreneurship

Fortwengel & Jackson (2016); Ahsan & Fernhaber (2019); Raziq et al. (2019); Hughes et al. (2020)

*Italicized papers are also included in the intersection.

6 papers explicitly

defined both IKT and IF

Valk et al. (2015)

Lin et al. (2016)

Bai et al. (2018)

Yu et al. (2020)

Gharagozloo et al. (2022)

Tran & Truong (2022)

FIGURE 4 Focuses of international knowledge transfer (IKT) and international entrepreneurship (IE) definitions.

external information of strategic value – such as globally relevant information about key customers, competitors or suppliers, from the foreign subsidiary to its parent company' with a focus on institutional and organisational mechanisms, as their research focuses on the role of government in promoting the internationalisation of small and medium-sized enterprises.

Among the 12 papers (see Figure 4), certain studies focus on the nature of knowledge by distinguishing between technology know-how (e.g. technological knowledge, patents) and business-related know-how (e.g. business models, management practices). Others delve into the distinctions between local and overseas knowledge, and explore the advantages that overseas knowledge could confer upon entrepreneurs/firms. The IKT unpacked in these papers also entails the conveyance of specific contextualised knowledge alongside general knowledge. This involves understanding different cultures, including their values, customs and social norms (Crespo et al., 2022; Tran & Truong, 2022), as well as complex business environments - global market trends, regulatory landscapes, competitive forces and emerging opportunities (Craiut et al., 2022; Noh & Lee, 2019). By grasping the nuances of local practices while transferring international knowledge via IE, international knowledge agents establish connections and adapt approaches to align with local norms (Lin et al., 2016).

Among the 28 papers that do not explicitly define IKT, some view it as providing intellectual resources from overseas to promote local growth in the form of IE (e.g. Grodek-Szostak et al., 2020; Tekin et al., 2021; Zygmunt, 2018). This implicit conceptualisation aligns with the economics and sociology perspectives, where IKT is seen as a process that occurs during a particular developmental stage of the knowledge sender and receiver countries to exchange resources and promote growth and development (Spencer, 2003; D. Wang, 2015). For example, Ferreira et al. (2020) study knowledge transfer to mitigate climate change as a collective effort. Moreover, knowledge transfer, seen as knowledge sharing and adaptation, fosters sustainable economic development (Ockwell et al., 2008).

The focal point of IKT within all the articles revolves around the identification and utilisation of key attributes of international knowledge, that is newness and competitiveness. According to Yu et al. (2020, p. 6), 'international knowledge is an intangible asset and provides a competitive advantage for firms in foreign markets. Both individuals and firms can utilise existing knowledge resources from prior cross-border business experiences to improve their learning from the foreign market entry experience'. On the newness and competitiveness of international knowledge transferred via IE, studies have emphasised experiential knowledge from individual cross-border experience (Balachandran & Hernandez, 2021; Pruthi, 2014; Valk et al., 2015; D. J. Wang, 2020; Yu et al., 2020) and organisational network resources obtained through international exposure (Battisti et al., 2022; Crespo et al., 2022; Hashai & Zahra, 2022; Lee et al., 2020; Torres de Oliveira et al., 2021). The international knowledge encompasses innovative business frameworks, unique concepts, organisational acumen and competitive management practices that enable and facilitate IE (Filatotchev et al., 2009; Lin et al., 2015; Tran & Truong, 2022; Wright et al., 2008).

In summary, our review of the literature shows that some studies presume the concepts without furnishing explicit definitions to clarify their conceptual foundations. This introduces ambiguity, hindering a thorough understanding of the relationship between IKT and IE. To

address this, we suggest a more nuanced understanding of IKT and IE. The diverse aspects of IKT in the literature prompt us to discuss the complementarity of international knowledge to domestic knowledge for future research in the next section.

IE definitional issues

A total of 18 papers explicitly defining IE predominantly use McDougall and Oviatt's (1997) definition or a refined version by the authors (2000). Three dominant types of IE are pertinent to IKT: returnee entrepreneurship, transnational entrepreneurship and international corporate entrepreneurship (see Figure 4).

Returnee entrepreneurship is the focus of 10 papers, including Drori et al. (2009), addressing both returnee entrepreneurship and transnational entrepreneurship, but only 9 papers explicitly define the concept. These papers draw on McDougall and Oviatt (2000) and Drori et al. (2009) to define returnee entrepreneurship as 'a subset of diaspora entrepreneurship that involves immigrants' entrepreneurs who have returned to their homeland to initiate business enterprises after a period of sojourning/living abroad' (Ojo, 2017, p. 595). Some further contextualise returnee entrepreneurship by focusing on the length of overseas experience (e.g. at least 2 years of studying or working) (Tran & Truong, 2022), purpose (e.g. to gain business or education experience) (Bai et al., 2018), field (e.g. scientists and engineers) (Liu et al., 2015), skill levels (Gruenhagen, 2021) and the economic status of host countries (e.g. developed/Western/OECD countries). Pruthi (2014, p. 1139) integrates some of these characteristics and provides a contextualised definition of returnee entrepreneurs as 'skilled personnel that have lived in a developed country for the purpose of work or study and have returned to their home country to start a new venture after several years of business experience and/or education abroad'.

Transnational entrepreneurship is the focus of 24 papers, but only 6 explicitly provide definitions. According to Drori et al. (2009), transnational entrepreneurs are migrants who maintain international contacts with the aim of sustaining economic, political, social and cultural cross-border relationships to foster new ventures. Santamaria-Alvarez and Śliwa (2016) define transnational entrepreneurship as the process whereby migrants, leveraging transnational ties and remittances, initiate businesses that operate in multiple countries. In relation to transnational entrepreneurship and IKT, studies have explored aspects like mutual cooperation through internationalisation, international networks and home country policies influencing migrants' entrepreneurial activities

(Grodek-Szostak et al., 2020; Santamaria-Alvarez & Śliwa, 2016; Tekin et al., 2021; Van Loon et al., 2020).

International corporate entrepreneurship is a key conduit of IKT in seven papers, with four providing explicit definitions. Drawing from Oviatt and McDougall (2005) and Reuber et al. (2018), Raziq et al. (2019) define international corporate entrepreneurship as the internationalisation process through which MNEs explore and harness global opportunities. They focus on multinational subsidiaries that are encouraged to cultivate and transmit knowledge to headquarters via international corporate entrepreneurship. Hughes et al. (2020) investigate international corporate entrepreneurship in the context of cross-border mergers and acquisitions, arguing that it can shape the acquired firm's post-acquisition independence and capacity for exploration and innovation.

Methodological aspects

As shown in Figure 5, except for five conceptual and review papers (Ahsan & Fernhaber, 2019; Audretsch & Caiazza, 2016; Bengoa et al., 2021; Drori et al., 2009; Noh & Lee, 2019), the level of analysis in the 35 empirical papers varies, encompassing individual (9), organisational (11) and regional/national levels (6), with some addressing multiple levels (9). The latter include (i) the individual-organisational level (3), (ii) the organisational-national level (3) (e.g. Sá and de Pinho's (2019) study on how national framework conditions foster new ventures) and (iii) the individual-national level (3) (e.g. Ngota et al.'s (2019) study of how entrepreneurial capability and institutional policies facilitate the exploitation of commercial opportunities).

Among 34 papers that specify their research contexts, most studies (22) focus on IKT via IE between developed and developing countries, the Global North–Global South context. This includes 10 papers investigating one-way IKT from the Global North to the Global South and 12 papers examining two-way IKT or interactive knowledge transfer between the Global North and the Global South. IKT via IE within the Global North (8) and within the Global South (4) are under-explored.

There are five conceptual articles from different levels. Ahsan and Fernhaber (2019) focus on the organisational level, identifying opportunities for subsidiaries to utilise MNEs' existing expertise and resources via international corporate entrepreneurship. Audretsch and Caiazza (2016) propose that regional growth varies primarily due to disparities in knowledge investment and institutional support for knowledge exchange and entrepreneurial activities at the national level. Bengoa et al. (2021) integrate knowledge transfer literature with a focus on organisational and

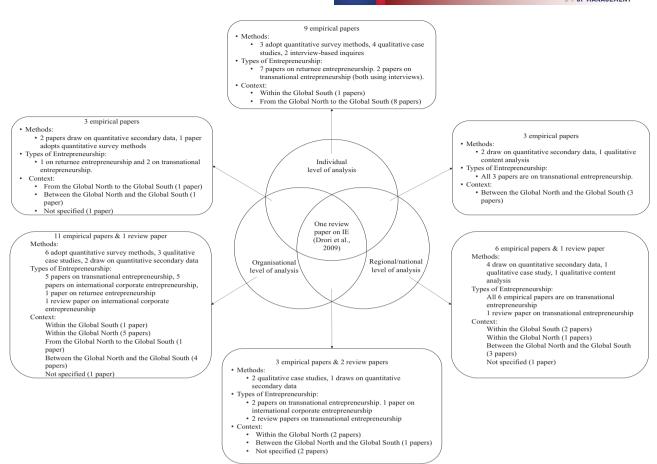


FIGURE 5 A summary of methods and research contexts.

national levels. Noh and Lee (2019) review existing studies on technology transfer from organisational and national levels. Drori et al.'s (2009) paper is the only one that reviews IKT via IE from individual, organisational and regional/national levels. Evidently, advancing IKT via IE at the intersection of different theoretical domains and investigative methods requires a more connected, rather than siloed, approach. Therefore, we will discuss how cross-disciplinary research can help develop new knowledge later.

Content analysis

Following Nielsen et al.'s (2020) analytical process and Gruner and Minunno's (2024) 'breakout' review model, we undertook a content analysis to scrutinise the text and underpinning context of each article, and adopted an iterative approach to move beyond the summary of these articles toward developing new ideas. We adopted an inductive coding method aligning with the grounded theory approach commonly used for analysing interview data in qualitative research (Gioia et al., 2013). Our process follows the guidelines by Tranfield et al. (2003) and resem-

bles the approach employed in other review studies that are often 'inductive or grounded in approach, with theoretical frameworks and research agendas emerging from the papers examined as part of the review' (Post et al., 2020, p. 362).

The content analysis involves three steps: (i) critically reviewing 40 articles by authors independently and collectively adopting the inductive approach, (ii) cross-checking coding and analysis among the authors and (iii) synthesising findings and developing the analytical framework. Specifically, two authors reviewed and coded the papers to systematically develop first- and second-order codes, laying the foundation of aggregated themes: international knowledge, international knowledge agents, IKT processes and IKT via IE outcomes, as key elements of IKT via IE. The other two authors checked to ensure accuracy, consistency and reliability.

All authors then worked collectively on content analysis to move beyond simple summaries and evaluate the content for depth, relevance, and alignment with research objectives to establish the unit of analysis, theoretical perspectives and key findings from the 40 articles. Building on synthesised knowledge, we collectively engaged in an iterative process to distil insights (Miles & Huberman,

1994), meaning that we continuously revisited coded data, re-interpreted and re-analysed papers and refined our understanding as new insights emerged through independent work and multiple meetings. This process facilitated necessary reflections and intellectual exchanges and helped validate findings and minimise bias. It is important to note that we do not assert that our review is the sole interpretation of the studies forming the basis of the review; instead, we acknowledge that it presents a reasonable interpretation based on reading and examination of texts (Ahuvia, 2001). Figure 6 presents the data structure generated from our content analysis, leading to our analytical framework in the Findings section.

FRAMEWORK

We consolidated our analysis and findings into a unified analytical framework as shown in Figure 7. It is structured in accordance with the 'inputs-mediators-outcomes' framework (Klotz et al., 2014), systematically assessing the inputs of distinct international knowledge and international knowledge agents, mediators as IKT processes and the outcomes of IKT via IE. This framework guides our subsequent discussions of three research themes emerging from the literature and anchors the identification of future research directions.

We have discussed definitional issues of IKT and IE to establish the basis of this analytical framework. In the following sections, we will discuss three discernible types of international knowledge agents that emerged from the literature analysis: returnee entrepreneurs, transnational entrepreneurs and international corporate entrepreneurs. We further delineate three distinct processes of IKT: one-way knowledge transfer, two-way knowledge transfer and interactive knowledge transfer. The outcomes of IKT range from venture creation and performance to regional/national development. In addition, our systematic analysis uncovers three key research themes that weave through the four elements of the analytical framework (Table 1).

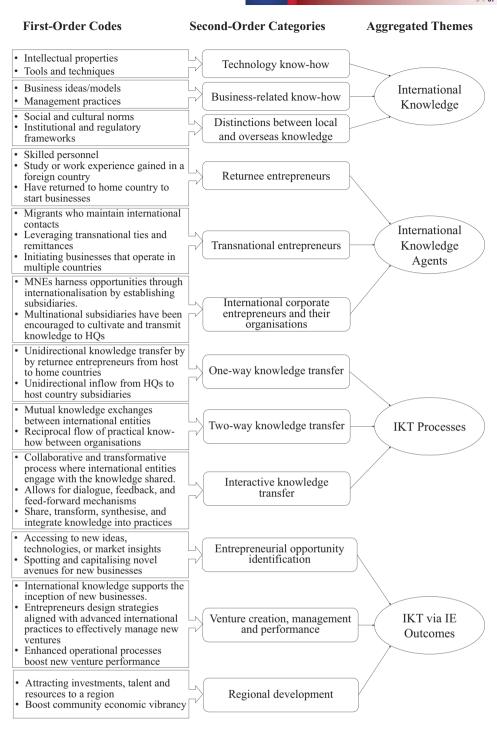
International knowledge agents and IKT process

IKT engages entities (individuals and organisations) as international knowledge agents in the three aforementioned IE processes. Returnee and transnational entrepreneurs as individual international knowledge agents bring innovative ideas, business models, technology, and management practices from international experience. By leveraging international knowledge

obtained from their firsthand exposure to diverse markets and practices, they identify and exploit entrepreneurial opportunities (e.g. Gruenhagen, 2021; Lin et al., 2016; Ojo, 2017), initiate and manage new ventures (e.g. Audretsch & Caiazza, 2016; Fortwengel & Jackson, 2016; Liu et al., 2015) and ultimately enrich local business landscapes (e.g. Ferreira et al., 2020; Gharagozloo et al., 2022). Corporate entrepreneurs and their organisations transfer international knowledge through international corporate entrepreneurship to increase subsidiaries' contribution to MNEs' global competitiveness (Lee et al., 2020) and enhance cultural alignment with the host country (Hughes et al., 2020). Entities as international knowledge agents face the key challenge of contextualising and recontextualising knowledge to enable successful IKT via IE. The contextually dependent nature of IKT has been highlighted in the literature, but its complexity is yet to be fully revealed. We will discuss the (re-)contextualisation of knowledge for future research later.

Further, IE is associated with three IKT processes: one-way knowledge transfer, two-way knowledge transfer and interactive knowledge transfer. The first involves unidirectional knowledge flow from an entity resident in one country to another entity in another country. For example, Crespo et al. (2022) adopt Cavaliere and Lombardi's (2015) definition of IKT as being 'the partial or identical replication of knowledge from one location to another' (Crespo et al., 2022. p. 2) to investigate the role of subsidiary leadership and culture in promoting marketing knowledge inflows. Focusing on the lateral and vertical knowledge and unidirectional inflow to host country subsidiaries, they find that strong subsidiary leadership and entrepreneurial culture promote the transfer of international marketing knowledge. Investigating the relationship between returnees' IKT and their entrepreneurial decisions, Lin et al. (2016) explore the unidirectional IKT by returnee entrepreneurs from host to home countries. They recognise the importance of knowledge re-contextualisation, a process whereby knowledge is perceived from a different perspective and acquires unique interpretations within different cultural settings.

Two-way knowledge transfer involves reciprocal knowledge exchange between international entities, with the emphasis on agents sharing knowledge. During this process, knowledge flows both ways, allowing one to benefit from the other's knowledge, but it typically stays within the bounds of knowledge-sharing. For example, Craiut et al. (2022) regard IKT as a dynamic process that evolves alongside technological advancement with various linear, non-linear and alternative models. In the context of IKT between Romania and other countries, they propose that IKT entails the reciprocal flow of practical know-how between organisations.



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FIGURE 6 Data structure. IE, international entrepreneurship; IKT, international knowledge transfer; MNEs, multinational enterprises; HQs, Headquarters.

Finally, interactive knowledge transfer involves a collaborative and transformative process where international entities engage deeply with the knowledge shared. Beyond simple exchanges, interactive knowledge transfer allows for dialogue, feedback and feed-forward mechanisms that enable knowledge agents not only to share but also to transform, synthesise and integrate knowledge into their practices. This form of IKT often leads to the cocreation of new knowledge or innovative solutions that go beyond the knowledge originally contributed by the knowledge agents. For example, Alonso-Martínez et al. (2021) find that knowledge transferred via international patent collaboration not only promotes entrepreneurship at the national level but also serves as a catalyst for cross-cultural knowledge transfer. The interactive knowledge transfer plays a pivotal role in shaping vibrant

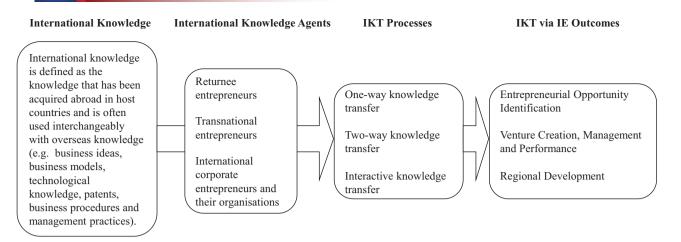


FIGURE 7 The analytical framework of international knowledge transfer (IKT) via international entrepreneurship (IE).

entrepreneurial landscapes through fostering innovation ecosystems. Two-way and interactive approaches echo Bradley et al.'s (2013) sentiment in the university technology transfer context. The traditional linear model of technology transfer oversimplifies the IKT process; there is no one-size-fits-all approach, and the context of IKT must be considered. Regardless of the above processes, IKT via IE is facilitated by international knowledge agents, but also involves multiple stakeholders. Effective IKT requires connecting and balancing stakeholder requirements to manage a dynamic process that epitomises the connectivity nature of knowledge, an under-researched topic in the literature which we will discuss in the following section.

Outcomes of IKT via IE

The literature examines three main outcomes of IKT via IE: (i) entrepreneurial opportunity identification; (ii) venture creation, management and performance and (iii) regional/national development. Firstly, IKT facilitates the identification of entrepreneurial opportunities, enabling entrepreneurs to spot and capitalise on novel avenues for business creation and growth (e.g. Bai et al., 2018; Gruenhagen, 2021; Lin et al., 2016). Secondly, IKT supports the inception and effective management of new ventures. Armed with intangible and competitive knowledge garnered from international experience, entrepreneurs can design strategies aligned with advanced international practices (e.g. Hashai & Zahra, 2022; Liu et al., 2015). Further, IKT has a direct impact on firm performance, providing new or established organisations with a broader perspective that enriches the strategic planning and operational processes (e.g. Lee et al., 2020; Pehrsson et al., 2015). Lastly, IKT promotes regional/national development by fostering innovation. Leveraging international knowledge,

entrepreneurs can boost community economic vibrancy, potentially attracting investment, talent and resources (Ferreira et al., 2020; Van Loon et al., 2020). Surprisingly, the literature has not explicitly addressed the impact of IKT via IE on community-based initiatives, social responsibility and sustainability. We will raise this critical issue through our discussion on community capitalism in future research.

RESEARCH THEMES

Our analytical framework also encompasses three overarching research themes that emerged from the 40 articles: (i) Theme 1: Exploration of definitions, the enablers of, and barriers to, IKT via IE; (ii) Theme 2: Investigation into international knowledge agents and IKT processes via IE and (iii) Theme 3: Examination of the critical factors affecting IKT via IE outcomes.

These themes are predominantly underpinned by six theoretical perspectives (Table 1): social capital theory, social network theory, human capital theory, institutional theory, the resource-based view and its extensions - the knowledge-based view and the dynamic capabilities view and learning theory. It is important to note that these theories are not isolated but inter-connected, influencing IKT via IE. We provide a detailed summary in Supporting Information.

Social capital theory, social network theory and human capital theory

We categorise these theories together due to their interconnectedness and shared common elements: social capital and human capital are complementary and can be cultivated through social networks. Social capital theory

TABLE 1 Theoretical perspectives, research themes and key findings.

Theoretical perspectives	Research themes	Key findings
• •	Themes 1, 2 and 3	 Network capability mediates the positive relationship between the international social networks of returnee entrepreneurs and their international performance (Bai et al., 2018). International patent collaboration helps increase acquisition of precise knowledge, and creates stronger networks that favour the appearance of new ventures with a global strategy (Alonso-Martínez et al., 2021).
Social network theory	Theme 2	 Local ties are indispensable for venture creation by return entrepreneurs despite the availability of international ties developed abroad (Pruthi, 2014). Returnees who transfer advanced technological knowledge and a combination of technological and business knowledge between host and home countries are more likely to become entrepreneurs (Lin et al., 2016).
Human capital theory		 Same-industry and other-industry international experience leads to different types of congenital knowledge, which differently affect the continued growth of international new ventures (Hashai & Zahra, 2022). Entrepreneurial activity in the Visegrad countries is determined significantly by the economy structure and human capital (Zygmunt, 2018).
Institutional theory		 The perception of a stable institutional environment stimulates returnee entrepreneurship, while the perception of estrangement negatively affects the intention to start a new venture in the home country (Gruenhagen, 2021). Cross-country institutional interactions can promote efficiency of knowledge transfer by sharing procedural information and coordination mechanisms to foster cross-border entrepreneurship (Grodek-Szostak et al., 2020). Through government support programs and favourable entry regulations, new and growing firms could benefit more from R&D investment (Sá and de Pinho, 2019).
Resource-based view, knowledge-based view, dynamic capabilities view	1	 The performance of born-global firms is impacted by the owner/manager's level of international knowledge, while also being influenced by the firms' dynamic capabilities (Yu et al., 2020). Investments in learning, knowledge, and capabilities are critical but subject to diminishing returns, implying a need for subsidiaries to make astute resource allocation decisions (Ahsan & Fernhaber, 2019). Subsidiary autonomy in the local market positively moderates the relationship between subsidiary entrepreneurship and knowledge creation (Lee et al., 2020). The more organisationally stable periods of an INV's foreign unit, the stronger the positive relationship between the product/market knowledge transferred from the parent firm and the foreign unit's dynamic capabilities (Pehrsson et al., 2015).
Learning theory		 Knowledge sharing between the acquiring and acquired entities fosters organisational ambidexterity (Hughes et al., 2020). The experiential and vicarious learning of returnee entrepreneurs positively contributes to firm performance (Liu et al., 2015). In the entrepreneurial trajectory, returnees engage in learning, re-learning and unlearning to foster sustainable entrepreneurial growth (Tran & Truong, 2022).

Note: Theme 1: Exploration of definitions, the enablers of, and barriers to, IKT via IE. Theme 2: Investigation into international knowledge agents and IKT processes via IE. Theme 3. Examination of the critical factors affecting IKT via IE outcomes.

emphasises that individuals embedded in social networks rich in social capital have access to valuable resources (Adler & Kwon, 2002) which can be leveraged for IKT via IE. Social network theory analyses the structure and patterns of social connections among individuals/groups and how these influence resource flow (Aldrich & Zimmer, 1986). It thus adopts a structural perspective by focusing on network connections relevant to the attributes of international entrepreneurs. In contrast, social capital theory emphasises the qualitative aspects of relationships and the

benefits derived from the quality of social connections that could influence both the process and the outcome of IKT via IE. Human capital theory centres on individuals' skills, knowledge and capabilities as key to personal and economic success (e.g. improved productivity and employability), suggesting individuals can leverage social capital and social networks to enhance their human capital (Gruber et al., 2012). Despite their different focuses, these theories overlap in practical applications, especially in themes related to IKT via IE; social capital theory has been employed in all three themes, and social network theory and human capital theory in Theme 2.

In Theme 1 related to enablers of, and barriers to, IKT via IE, Bai et al. (2018) recognise social capital as comprising both the networks and the resources mobilised within them, which includes networks containing both relational and structural resources acquired by entities through their connections. They reveal that, in returnees' ventures, their network capability mediates the positive relationship between their international social networks and venture performance. It is essential to note that social capital theory is concerned with the resources accessible through social relationships in both host and home countries for international entrepreneurs (Bai et al., 2018; Gruenhagen, 2019). Social capital theory considers social networks in institutional conditions as sources of valuable resources such as trust, information and support. The social capital derived from these relationships benefit both international entrepreneurs (Gruenhagen, 2019) and their new ventures (Alonso-Martínez et al., 2021). Some studies (e.g. Pruthi 2014) integrate social capital theory and social network theory, arguing that returnee entrepreneurs' personal and professional networks provide social capital, and influence the feasibility of venture creation.

In Theme 2 related to key attributes of IE and mechanisms for IKT, social network theory has been employed to reveal that returnees facilitating the transfer of advanced technological knowledge, along with a combination of technological and business acumen between their host and home countries, are more inclined to become entrepreneurs (Lin et al., 2016). Cross-border connections boost the chance of returnees establishing ventures (Wang, 2020). Connections with former colleagues abroad serve as valuable channels for accessing novel knowledge, thereby facilitating the identification and development of entrepreneurial ideas. Similarly, Pruthi (2014) employs social network theory, recognising that social networks lead to sources of information and ideas (e.g. local business contacts and distribution channels) which trigger opportunities and provide resources for new ventures (Sullivan & Ford, 2014). Different from social capital theory, social network theory directs attention to the structure and patterns of relationships between entities, emphasising the connections and interactions within a network. It delves into the nodes (international entrepreneurs or new ventures) and ties (relationships within or across host and home countries) providing insights into how these connections influence IKT.

In addressing Theme 3 related to critical factors affecting IKT outcomes via IE, Hashai and Zahra (2022) draw on human capital theory and emphasise the founding

team's expertise acquired and honed through prior international experiences. Experience within the same industry and across different industries engenders disparate forms of congenital knowledge, exerting divergent effects on new ventures. Specifically, prior international experience within the same industry negatively impacts continued international expansion of new ventures, whereas experience in different industries positively affects growth initiation and continuation.

Institutional theory

Institution theory has predominately been employed in Theme 1, focusing on the role of home and host country institutional conditions and their effects on fostering or hindering IKT via IE at individual, organisational and regional/national levels. For example, Gruenhagen (2021) investigates the home country institutional environment for returnee entrepreneurs across three dimensions: regulatory (e.g. regulations, tax systems, intellectual property protection), normative (e.g. societal acceptance of entrepreneurship, appreciation of innovation, role models), and cognitive (e.g. availability of shared knowledge related to markets and legal protection). The findings suggest that a perceived stable institutional environment catalyses returnee entrepreneurship. However, Gruenhagen (2021) identifies that a sense of estrangement negatively affects the intention to initiate a new venture in one's home country; individuals aspiring to return and engage in entrepreneurship may experience detachment from local network ties because of extended periods of study or work abroad. Their local knowledge may also become outdated (Lin et al., 2019). Consequently, estrangement denotes a loss of social and human capital in the home country that impedes IKT via IE. However, there is limited evidence on how the three dimensions interact with estrangement to affect the process of IKT via IE, a topic for future research.

Besides leveraging institutional theory to investigate individual perceptions of the host and home countries' institutional conditions (e.g. Gruenhagen, 2021; Santamaria-Alvarez & Śliwa, 2016), Grodek-Szostak et al. (2020) and Ojo (2017) employ institutional theory to investigate the role of technology transfer in promoting renewable energy resources in Poland, the Czech Republic and Latvia at the national level. They find that cross-country institutional interactions can enhance IKT efficiency by sharing procedural information and coordination mechanisms to foster IE. Sá and de Pinho (2019) employ institutional theory at the organisational and national levels, proposing that government support programs and favourable entry regulations can

Resource-based view, knowledge-based view and dynamic capabilities view

The resource-based view and its extensions - the knowledge-based view and the dynamic capabilities view - have been employed in Theme 3. The resourcebased view elucidates the role of a firm's internal resources and capabilities (e.g. specialised knowledge, technological proficiency, managerial expertise and cross-cultural competencies) in shaping IKT via IE; distinctive and valuable resources and capabilities significantly influence competitive advantage, enabling the initiation, navigation and sustainment of IE (Barney et al., 2001; Torres de Oliveira et al., 2021). Drawing on the resource-based view and the information economics perspective, Gharagozloo et al. (2022) investigate variations in how different countries guide and allocate resources for R&D initiatives at the national level. Their findings suggest that a more digitally advanced economy positively influences the transfer of national R&D to international entrepreneurs and their enterprises. Torres de Oliveira et al. (2021) examine Vietnamese manufacturers in global value chains, proposing that strategic choices of entrepreneurial ventures are based on internal capabilities and resources, as well as external environments. Engaging in international ventures helps navigate institutional misalignments that heighten challenges and uncertainties in domestic markets, offering a strategic choice despite additional costs and risks of internationalisation (Clarke & Liesch, 2017).

The knowledge-based view considers knowledge as a critical resource and posits that not only the possession of knowledge assets but also their effective management and utilisation contribute to a firm's ability to navigate international market complexities (Cooper et al., 2023; Felin & Hesterly, 2007). The ability to acquire, create and apply knowledge strategically is central to leveraging IKT (Crespo et al., 2022; Yu et al., 2020). Crespo et al. (2022) find that strong leadership support and entrepreneurial culture in a subsidiary foster knowledge inflow from headquarters and peer subsidiaries, enhancing the focal subsidiary's innovation abilities. Yu et al. (2020) show that the performance of born-global firms is notably impacted by the owner/manager's level of international knowledge, as perceived interdependently with firm performance, while also being significantly influenced by the firms' dynamic capabilities.

The dynamic capabilities view emphasises a firm's ability to adapt, innovate and reconfigure its resources and capabilities in response to changing environments (Teece, 2014). Given the varying market conditions, regulatory

environments and cultural landscapes across borders in IE, dynamic capabilities are crucial for firms and so they need to make continual adjustments to secure value creating potential and to achieve competitive advantages. For example, Lee et al. (2020) find that subsidiary autonomy positively moderates the relationship between subsidiary entrepreneurship and knowledge creation; knowledge creation positively impacts the subsidiary's position within the MNE's network, which in turn positively influences IKT to other overseas subsidiaries. Thus, the dynamic capabilities view recognises the importance of renewing and reconfiguring resources for sustained competitive advantage in the dynamic global landscape of IE.

Learning theory

Learning theory helps address Theme 3 by illuminating how entities recognise and integrate valuable knowledge from their international experience into their existing knowledge structures. Knowledge absorption is integral to decision-making processes and informs entrepreneurial activities. Adaptive learning, which leads to organisational ambidexterity, becomes pivotal in the dynamic landscape of IE (Hughes et al., 2020), as organisations must continually refine their strategies in response to shifts in business environments, regulatory landscapes and market conditions.

At the individual level, learning theory explores how international entrepreneurs engage in experiential learning, drawing insights from direct exposure and participation in global markets, and embracing formal and informal learning mechanisms to enhance their competences and firm performance. For example, the experiential and vicarious learning of returnee entrepreneurs positively contributes to firm performance (Liu et al., 2015). Tran and Truong (2022) have developed a dynamic learning process model for returnee entrepreneurs in Vietnam to recontextualise their overseas knowledge while establishing new ventures at home. The entrepreneurs engage in interactive, vicarious and intuitive learning in the prefounding phase to comprehend overseas knowledge, adopt a blended learning approach during the founding phase to balance market response and imposition, and in the growth phase cyclically navigate between un-learning and re-learning to discard, select, and recreate knowledge, fostering sustainable entrepreneurial growth.

At the organisational level, Hughes et al. (2020) explore international corporate entrepreneurship to examine how the behavioural context such as corporate entrepreneurship and the structure of integration regulate IKT activities. Their findings indicate that knowledge sharing between the acquiring and acquired entities fosters organisational ambidexterity, whereas excessive utilisation of

capabilities acquired from the acquired entities negatively impacts it.

These diverse theoretical perspectives provide a nuanced understanding of the intricate mechanisms underlying IKT via IE. However, many studies neglect to fully unpack and elaborate on the theories they adopt. Significant knowledge gaps remain, necessitating further exploration to uncover the intricacies of IKT via IE. Identifying these gaps highlights the need for future research to delve into both under-explored and unexplored dimensions, thereby advancing the scholarly discourse on the triggers, processes, and outcomes of IKT via IE – a topic which we will discuss later.

DISCUSSION AND FUTURE RESEARCH

Our paper contributes to the IE literature by providing a critical understanding of IKT via IE and their mutually reinforcing nature. International knowledge is transferred by international knowledge agents in returnee, transnational and international corporate entrepreneurship, and involves three distinctive processes (one-way knowledge transfer, two-way knowledge transfer and interactive knowledge transfer), which results in outcomes at individual, organisational and regional/national levels. IKT via IE is mainly underpinned by six theoretical perspectives as discussed above. Anchored in our analytical framework (Figure 7), we now discuss future research directions along the dimensions of the 5Cs: complementarity of knowledge, (re-)contextualisation by international knowledge agents, connectivity of knowledge, community capitalism and cross-disciplinary research (Figure 8). The dimensions are interconnected, which we will delineate

We start with the complementarity of international knowledge to domestic knowledge, a crucial attribute that instigates its transfer across borders, followed by knowledge (re)contextualisation underscoring the essential role of international knowledge agents in ensuring effective IKT in IE. We move onto knowledge connectivity on a global scale, within which IE contributes to global innovation and collaboration through three distinctive IKT processes. We then discuss the significance of IKT via IE in boosting outcomes at individual, organisational and regional/national levels beyond economic performance, to contribute to community capitalism aligning with SDGs. Finally, we call for more cross-disciplinary research to integrate economics, sociology and environmental science to deepen our understanding of IKT via IE. Therefore, our discussion builds on and expands the analytical framework (Figure 7) and is summarised in Figure 8.

Complementarity of international knowledge to domestic knowledge

Existing literature elaborates on different types of IE and distinctive IKT processes, but there is a gap in understanding regarding the nature of the knowledge transferred via IE. Fundamentally, the international knowledge transferred by entrepreneurs versus that by organisations can differ along several dimensions. For example, international knowledge transferred by entrepreneurs is often more experiential and tacit, whereas that by organisations may include explicit forms, for example codified information, procedures and manuals (Kiss et al., 2012).

Organisations, with their structured processes and established procedures, may transfer knowledge that is less dynamic and less adaptable to unique circumstances compared to the more agile knowledge transfer in returnee and transnational entrepreneurship. International corporate entrepreneurship may also be constrained by risk mitigation strategies and the need to align with organisational goals. In contrast, returnee or transnational entrepreneurs, leveraging their experiential knowledge and risk-taking tendencies, can navigate uncertainty more effectively (Pisano et al., 2007). Moreover, differentiating between technology and business-related know-how, and between local and overseas knowledge, presents challenges to entrepreneurs and their firms in the IE process (Fernhaber et al., 2009). Further research needs to delineate the nuanced nature of the knowledge transferred. Exploring these intricacies will provide a comprehensive understanding of the specificities and complexities of IKT via IE.

The complementarity of knowledge helps unleash the potential of different knowledge originating from diverse sources and disciplines to work synergistically, enhancing overall understanding, problem-solving and innovation (Acharya et al., 2020). Integrating diverse knowledge components can lead to more productive IE activities (Ghio et al., 2014). This calls for a cross-disciplinary and integrated perspective that recognises the roles of diverse knowledge sources in fostering innovation and effective decision-making amid global market opportunities and challenges. Future research will help to appreciate the interconnectedness and mutual reinforcement of diverse knowledge components exchanged in IE.

Moreover, integrating various forms of knowledge from diverse contexts enables international entrepreneurs to address challenges and seize opportunities when establishing international new ventures (Un & Rodríguez, 2018). Specifically, complementarity of knowledge might involve leveraging technical expertise alongside cultural insights or combining industry-specific know-how with

Future Research Directions

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Complementary of knowledge

- How do different forms of knowledge (experiential, tacit, and explicit) complement each other?
- What role does cultural and local market knowledge play in enhancing the effectiveness of cross-border knowledge transfer via IE?

(Re-)Contextualisation of knowledge

- How do returnee entrepreneurs effectively engage in unlearning and relearning processes to recontextualise international knowledge?
- What are the key factors that enable transnational entrepreneurs to adapt and transform acquired knowledge across diverse cultural, institutional, and
- How does international corporate entrepreneurship recontextualise organisational knowledge to align with the cultural and institutional dynamics of host countries?

Connectivity of knowledge

- How do international entrepreneurs act as catalysts for international knowledge connectivity and what are the mechanisms they use to facilitate the IKT process?
- In what ways do international entrepreneurs influence the reconfiguration of the global value chain through knowledge connectivity and co-creation
- How can international entrepreneurs systematise tacit knowledge to establish standardised processes that enhance IKT and connectivity?

Community capitalism

- How do international entrepreneurs facilitate the integration of international knowledge into local community practices to enhance community capitalism?
- What are the impacts of IKT via IE on regional innovation and economic development within the framework of community capitalism?

Cross-disciplinary research

- How can integrating perspectives from political science, sociology, and economics enhance our understanding of the mechanisms and outcomes of IKT via IE?
- How can cross-disciplinary approaches facilitate the synergistic integration of diverse knowledge sources in IE?
- How can cross-disciplinary approaches in political economy and sociology enhance our understanding of the role of IE in promoting community capitalism and addressing local

FIGURE 8 Future research directions for investigating international knowledge transfer (IKT) via international entrepreneurship (IE).

a deep understanding of local market dynamics. Future research can unpack the nature of this complementarity to understand what knowledge has been transferred and how international knowledge complements domestic knowledge to advance IE.

(Re-)contextualisation of knowledge

Existing literature highlights the fact that knowledge is contextually dependent and embedded within the institutional and market environments of its origin (Williams, 2007). Being a contributor to global knowledge connectivity and a vehicle for knowledge absorption and distribution across borders, IE activities require recontextualising knowledge in accordance with the host country setting (Lin et al., 2016). This requires entities as international knowledge agents to contextualise and recontextualise knowledge to enable successful IKT via IE.

returnee entrepreneurship, knowledge contextualisation involves realigning international experience with the home-country setting (Tran & Truong, 2022; Wang et al., 2024). After studying or working abroad, returnee entrepreneurs may experience estrangement (Lin et al., 2019; Gruenhagen, 2021). Therefore, effectively transferring international knowledge necessitates a cycle of unlearning and relearning. The unlearning process includes filtering, selecting and discarding unfit knowledge from international experience to align with the home country's institutional setting. Organisational

learning literature highlights that unlearning is integral to upgrading organisational practices (Tsang & Zahra, 2008) and facilitates organisations responses to a changing environment (Pinto, 2019; Zhao et al., 2013). We extend this by proposing unlearning as a starting point to recontextualise international knowledge. Unlearning lays the foundation for effective knowledge adaptation and utilisation, leading to relearning and creating new knowledge in the new setting in pursuit of entrepreneurial development.

In transnational entrepreneurship, knowledge recontextualisation involves adapting, adjusting transforming acquired knowledge to suit the specific cultural, institutional and market contexts of different countries or regions (Sá & de Pinho, 2019). It requires the ability to reinterpret and apply international knowledge in a relevant and effective manner within diverse business environments. The fluid and ongoing nature of transnational entrepreneurship facilitates global knowledge connectivity by recontextualising and tailoring international knowledge to each specific context while navigating the complexities of varying markets, regulations and consumer behaviours across borders. This also sets the stage for two-way knowledge transfer and interactive knowledge transfer, as transnational entrepreneurs not only bring knowledge to new markets but also gain insights and understanding from those markets' unique challenges and dynamics. This reciprocal exchange fosters a dynamic learning environment, promoting innovation and adaptability. Further, the adaptability of transnational entrepreneurs in recontextualising knowledge enables

them to bridge cultural and institutional gaps, fostering cross-border collaboration and enhancing knowledge connectivity in global business ecosystems.

In the context of international corporate entrepreneurship, recontextualising knowledge pertains to the adaptation and transformation of international knowledge by established organisations when they launch new ventures in different countries. This process involves recontextualising and modifying existing organisational knowledge, strategies and practices to align with the specific cultural and institutional dynamics of the host country (Fortwengel et al., 2023). The fluid and ongoing nature of international corporate entrepreneurship emphasises the systematic adaptation and interactive transfer of knowledge, based on the existing knowledge, to align with the unique challenges and opportunities presented by different markets. Therefore, within the re-contextualisation process, the learning and unlearning cycle carried out by international corporate entrepreneurship via interactive knowledge transfer at an organisational level contributes to global knowledge connectivity and initiates increasingly structured processes and resource allocation by organisation seeking to expand their global footprint (Fortwengel, 2017). Moreover, as existing studies have primarily investigated the dynamics of knowledge re-contextualisation within the transfer process from developed to developing countries, exploring this in the Global South context represents a promising avenue for future research. This could shed light on how IE adapts to the specific contexts of developing economies and contributes to more nuanced understandings of the re-contextualisation process.

Connectivity of knowledge

Knowledge connectivity refers to the degree and effectiveness of the links, interactions and networks that facilitate the transfer, sharing and co-creation of knowledge among entities within the global value chain (Cano-Kollmann et al., 2016; De Silva et al., 2023). Knowledge connectivity goes beyond transmitting information; it involves establishing and maintaining connections that facilitate a continuous and dynamic exchange of insights, which fosters innovation, problem-solving and collaboration in the international context (Andersson et al., 2015). Existing literature has investigated knowledge connectivity focusing on the interactions between MNEs and their host locations (Cantwell & Santangelo, 1999; Chakravarty et al., 2021), the incentives driving the pursuit of knowledge (Song & Shin, 2008), and the co-evolution of firms and locations within the global value chain which transfers tacit knowledge via both organisational pipelines and personal relationships (Cano-Kollmann et al., 2016).

Our review highlights the dearth of research focusing on the role of IE in international knowledge connectivity. Building upon insights garnered from the 40 papers reviewed, we call for more research on this topic, particularly recognising IE as a catalyst and learning mechanism for international knowledge connectivity. International entrepreneurs can act as key connectors in social networks linking stakeholders with researchers, investors and customers, but also as intermediaries translating knowledge to commercially viable products, services and business models. The dynamic capabilities of international entrepreneurs in continuously learning, adapting to changes in their evolving business landscape, and managing environmental uncertainties would also make a fruitful avenue of future research.

Within the global value chain, key activities including both specialised and non-repetitive activities, and standardised and repetitive activities, are distributed to matching geographic locations (Lorenzen & Mudambi, 2013). Through IE, individuals and corporates can reconfigure the existing international division of labour by leveraging unique knowledge acquired, and implement it across different countries (Luo, 2022). Moreover, this engagement with varied environments fosters a rich exchange of perspectives, expertise, and experiences (Kano et al., 2020; Pinto, 2013). As individuals and corporates navigate these international landscapes, the cross-fertilisation of ideas offers the potential to knowledge co-creation (Audretsch et al., 2023). Therefore, future research can investigate the role of IE in reshaping the global economic framework which could result in a more dynamic and flexible arrangement of tasks and responsibilities, influenced by the strategic utilisation and co-creation of specialised knowledge in various international settings.

Further, international entrepreneurs as international knowledge agents have the potential to contribute to knowledge connectivity by codifying and systematising tacit knowledge in the new context, thus they possess the potential for converting present specialised and non-repetitive tasks into prospective standardised and repetitive activities through IE. Future research could focus on the establishment of standardised processes that transform IE into a vehicle for disseminating expertise, promoting consistency, and enabling a broader audience to engage with and implement the acquired knowledge, which could further enhance IKT, fostering more cohesive globally connected knowledge networks.

Community capitalism

Community capitalism refers to an economic model emphasising local or community-based initiatives,

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cooperation and shared benefits within the broader capitalist structure (van Dyk, 2018). It involves firms prioritising community development, social responsibility and sustainable practices alongside the economic objectives of profit maximisation and market share enhancement. Although there are studies on SDGs, corporate social responsibility, social enterprises, community-based enterprises and local economic development in the broad international business and entrepreneurship literature (e.g. Bell et al., 2018; Krisciunas & Greblikaite, 2007; Montiel et al., 2021; Schaltegger et al., 2018; Zucchella, 2021) that touch upon the principles of community capitalism (Baker & Nelson, 2005), research specifically addressing the intersection of community capitalism and IKT via IE is scarce.

At the local level, IE can act as a conduit for the transfer of diverse knowledge through entrepreneurial activities, strengthening the community's foundation. International entrepreneurs bring valuable insights and practices from different markets and cultures to the local community, inspiring and empowering local businesses (Kraus et al., 2021) and enhancing their competitiveness (Breitenecker et al., 2016). Community initiatives and grassroots activities play a pivotal role in integrating the knowledge disseminated through IE into the fabric of local economies (Fuller-Love et al., 2006; H. L. Smith & Bagchi-Sen, 2012). This aligns with the broader perspective that community engagement is essential for realising the full potential of IKT via IE, thereby contributing to the principles of community capitalism.

The transfer and integration of overseas and local knowledge through IE can establish sustainable businesses that contribute to the overall resilience of local communities (del Olmo-García et al., 2023). By addressing local challenges and leveraging global insights, international entrepreneurs can enhance the competitive advantage of their ventures and the robustness of the local economy. IE activities that transfer knowledge across borders contribute to SDGs by fostering resilience, promoting economic growth, decent work and industry innovation, and instigating positive changes in local business ecosystems. Future cross-disciplinary research in areas such as political economy and sociology could further develop our understanding of the complex dynamics of IKT via IE and its impact on knowledge connectivity and community capitalism.

Cross-disciplinary investigation of IKT via IE

IKT via IE involves the intersection of various domains, including politics, sociology and environmental science, as well as economics, business and management studies

(Drori et al., 2009). A siloed approach within a single discipline may overlook the complexity of IKT via IE, as it involves the transfer of different types of knowledge (e.g. explicit vs. tacit; technical, cultural and business-related) via different processes (one-way knowledge transfer, two-way knowledge transfer and interactive knowledge transfer) and by various international knowledge agents (returnee entrepreneurs, transnational entrepreneurs and international corporate entrepreneurs). Hence, this hinders a comprehensive understanding of this process (Dabić et al., 2022). For instance, political factors significantly influence policies that impact IKT mechanisms (Kostova et al., 2008). Sociological perspectives contribute insights into cultural dynamics and social networks, elucidating how societal structures influence knowledge transfer via entrepreneurship in different contexts (Jones & Coviello, 2005). A holistic investigation through synthesising insights from diverse fields is essential to grasp the intricate interplay of factors influencing the process of IKT via IE and driving the outcomes.

Cross-disciplinary research is imperative for investigating IKT via IE, especially in addressing grand challenges and aligning with the pursuit of SDGs (Kunisch et al., 2023). The interconnected nature of global business necessitates a comprehensive approach that transcends traditional disciplinary boundaries (George et al., 2016). Grand challenges such as sustainable development, economic inequality, and geopolitical tensions demand insights from different disciplines to formulate effective solutions (Buckley et al., 2017; Fernhaber & Zou, 2022). A crossdisciplinary lens enables researchers to explore the intersectionality of these challenges and understand how IKT via IE can mitigate these issues. It also allows researchers to examine how entrepreneurial activities can contribute to specific SDGs (Montiel et al., 2021), for example shedding light on the role of international entrepreneurs in fostering sustainable practices and social inclusion (Schaltegger et al., 2018).

Cross-disciplinary research enhances its theoretical richness. Integrating perspectives from different disciplines allows for the development of more robust and nuanced conceptual frameworks. For instance, combining insights from organisational theory, political science, and sociology provides a holistic view of the complexities involved in the co-evolution of firms and locations in IE (Cano-Kollmann et al., 2016). This approach enriches the theoretical foundations, enabling the exploration of the interconnectedness of knowledge transfer with greater depth and breadth.

Moreover, cross-disciplinary research facilitates the development of practical insights with broader applicability. The challenges faced by international entrepreneurs often transcend disciplinary boundaries. Investigating IKT via IE through a cross-disciplinary lens enables the

identification of actionable strategies that consider the interplay of economic, political and social factors. For example, integrating insights from management, politics and sociology may help entrepreneurs navigate cross-cultural collaboration in politically sensitive regions, acknowledging the impact of institutional and societal factors (Welter & Smallbone, 2010). Cross-disciplinary research, therefore, advances theoretical understanding and provides pragmatic guidance for IE in an interconnected world.

CONCLUSION

Based on a critical evaluation of the IKT via IE literature, our paper makes a significant contribution to the IE literature by developing an analytical framework (Figure 7) as a blueprint for a holistic understanding of the current state of the field. It includes four key elements: international knowledge, international knowledge agents, IKT processes and outcomes. Our evaluation of these elements combined with a critique of theoretical perspectives and methodological approaches leads to recommendations for future research (Figure 8) to collectively advance knowledge on IKT via IE.

From a practical standpoint, this paper offers significant insights for international entrepreneurs seeking to leverage IKT for competitiveness. By understanding the distinctive IKT processes, practitioners can tailor their strategies to optimise international knowledge utilisation and creation in combination with domestic knowledge. Further, the framework highlights the critical role of international knowledge agents in (re-)contextualising knowledge to align with local market dynamics, thus facilitating more effective cross-border business operations. For transnational entrepreneurs, the emphasis on knowledge adaptability and the fluid nature of knowledge (re-)contextualisation offers practical guidance on navigating diverse regulatory, cultural, and market environments to foster innovation and growth.

Our findings have important policy implications. Policymakers aiming to optimise positive outcomes of IKT via IE should focus on creating supportive structures that encourage cross-border knowledge exchange and transfer. Policies that promote international collaboration and mobility can enhance the flow of knowledge globally, contributing to regional/national innovation ecosystems. Further, aligning entrepreneurial activities with SDGs can be facilitated through policies that incentivise sustainable and inclusive business practices embedded in local communities. By acknowledging the interconnectedness of economic, social and environmental factors, policies can be developed to contribute to broader societal well-being.

We acknowledge the limitations of this paper. Firstly, our review is confined to English-language literature. We may have overlooked contributions published in other languages. Echoing the movement towards decolonising international business research (Banerjee, 2022; Westwood & Jack, 2007), diverse cultural contexts and linguistic perspectives could be valuable for understanding IKT via IE. Secondly, we have not accounted for the industrial context, despite its importance in knowledge transfer (Bekkers & Bodas-Freitas, 2008), as the nature of knowledge can vary significantly across industries. However, many of the papers did not specify their industry context, making it difficult to address this boundary effectively. Thirdly, we excluded IKS, a critical aspect of cross-border knowledge dynamics. Although this was a deliberate decision to maintain a focused review, it may overlook insights where knowledge spillover and transfer overlap (Scarrà & Piccaluga, 2022). Finally, some studies have employed correspondence analysis based on homogeneity analysis by means of alternating least squares (e.g. Dabić et al., 2022; Vlačić et al., 2021) to map the intellectual structure of different research fields. We could not incorporate this approach into our analysis. This is mainly because our sample of 40 studies comprises a mix of conceptual/review, quantitative and qualitative studies, each with distinct characteristics and types of data. It is challenging to encode this diverse data into a framework suitable for multiple correspondence analysis. Future research may consider the method when a more homogeneous set of primary studies becomes available.

In conclusion, our paper provides an analytical framework that enhances understanding of IKT via IE. By identifying the critical role of international entrepreneurs as international knowledge agents, the processes of IKT and the associated outcomes of IKT via IE, it offers theoretical and practical insights that can guide future research and practice. Anchoring future research through a comprehensive, multi-level and cross-disciplinary structure, it opens opportunities for advancing research on IKT via IE, helping it to develop and mature. It also informs IE practitioners seeking to accelerate the effectiveness of IKT, leading to a greater impact.

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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