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Discovering ethnic minority business research directions using text mining and topic modelling

Abstract

Purpose: This study aims to unveil within the current academic literature the principal directions in the ethnic entrepreneurship and small business marketing research context.

Design/methodology/approach: An automated literature analysis procedure was undertaken, attempting to cover all literature published on the subject since 1962. A total of 188 articles were analysed using text mining and topic modelling.

Findings: The results show a lack of framing of ethnic entrepreneurship literature outside the narrower scope of migration. Some core themes were found (e.g., network, diversity) around which several other themes orbit, including both related issues to the ethnic factor (e.g., barriers and minorities) and managerial issues (e.g., marketing and production).

Originality: Ethnic minority business and small business marketing research has seen a growing number of publications. However, a careful review of existing work is missing.

Background

Cultural and ethnic diversity has significantly increased in the world in both developed countries (e.g., Australia, Canada, United Kingdom, United States) and emerging ones (e.g., Bulgaria, China, and India), as recognised in the scholarly literature (Jamal et al., 2015). International migration flows boosted this diversity which became a by-product of the resilience of minority ethnic groups within the national boundaries of such destination countries.

The supply of ethnic-specific products delivered to ethnic minority consumers in culturally sensitive ways is mainly assured by a large number of small ethnic minority businesses (EMBs) (Pires & Stanton, 2018). EMBs are acknowledged in most countries' markets (Organization for Economic Co-operation and Development, 2010) and flourish in some communities (Clark & Drinkwater, 2010). This type of small business is commonly characterised as depending on inauspicious 'low value' niches (Verver et al., 2019) within minority markets usually defined by ethnicity, often involving an over-reliance on co-ethnic customers (Wang & Altinay, 2012) and employees (Kitching et al., 2009), being considered more innovative than non-ethnic small businesses (Capel, 2014; Haq et al., 2021). Although their importance has always been relevant, the COVID-19 pandemic reinforced their significance to local, regional, and national economies (Haq et al., 2021).

EMB research has seen a growing number of publications (e.g., Liu et al., 2020; Orozco, 2021; Tao et al., 2021). However, a careful review of existing work is missing. A literature review is fundamental to developing sustainable evolution in a field of study. Moreover, uncovering research directions allows researchers to adjust their focus according to the identified trends, gaps and saturated areas of a determined research field (Webster & Watson, 2002), determining a roadmap in the EMB research (Rowe, 2014). Accordingly, this paper aims to summarise the

research conducted in the EMB context, suggesting promising future directions using a text mining approach and topic modelling analysis of selected literature involving EMB operations. Text mining is the process of discovering hidden patterns from unstructured data (e.g., text) that can be translated into valuable knowledge (Furtado et al., 2022; Rita et al., 2020). It enables summarising the lexicon of words used in data structures from which knowledge can then be extracted. Topic modelling permits profound scrutiny and finds terms that often appear together in many documents or texts (Ramos et al., 2019). Accordingly, this study is guided by three main research questions:

1. What are the research topics that characterise the extant research focus on EMB?
2. Which gaps can be identified from discussing the extant literature on EMB?
3. Which recommendations can be made for EMB research going forward?

For added clarity, the concepts of immigrant, ethnic entrepreneur and EMB adopted in this study are addressed in the next section. Materials and methods are then discussed, followed by results, discussion, conclusion, limitations, and recommendations for further research.

Immigrants, ethnic entrepreneurs, and ethnic minority business

Ethnic minority entrepreneurs are considered either immigrants in a host country or their children and grandchildren who start up and develop an EMB within the community space. EMBs often focus on the unmet needs and demands of their minority ethnic group (or community) of affiliation and eventually join the community's ethnic business network as suppliers in the process of running their EMB (Lam et al., 2019). This conceptualisation of an ethnic entrepreneur is congruent with Carter et al.'s (2015) identification of EMBs as those small businesses whose owners/operators are categorised by their distinct ethnicity/culture/religion relative to the indigenous population. Independently of whether they are immigrants or descendants of immigrants, such that they self-ascribe themselves (and are

seen by others as belonging) to a specific minority ethnic group with a common origin and culture (Jugert et al., 2022).

Highly relevant to this research, the literature does not offer an unambiguous definition of an EMB, with definitions tending to vary with the purpose of the examined subject. For example, the European Commission (2008) refers to ethnic minority-owned businesses and differentiates between ethnic and immigrant entrepreneurship. Accordingly, an EMB is either a business connected to a particular immigrant group, functioning on a closed basis and dependent on a certain community (including workers, suppliers, and clients), or it may refer to businesses that target non-ethnic clients functioning in the open economy. EMBs as businesses that are either wholly or at least 50 per cent owned by people of ethnic minority origin from a different cultural and linguistic background to those businesses managed predominantly by 'white', European, English-speaking people (Ram & Jones, 2008). In contrast, in the US, the need for an EMB to be at least 51 per cent minority-owned was reduced to as little as 30 per cent minority ownership for the business to be eligible for corporate minority-targeted contracts (Sonfield, 2005). The implications of EMBs being defined in this fashion are understandable because official statistics may report likewise, but the EMBs' ethnic characteristics may, in fact, not apply. Turnstone Research and Consultancy (2004) followed a distinct approach in a report for the Advisory, Conciliation and Arbitration Service (ACAS), agreeing that the most obvious definition is by reference to the ownership and management of the EMB, but arguing that other factors also need to be taken into account, namely the ethnic mix of the staff, the product or service offered, and the customer base.

Approach and methods for literature analysis

Selecting literature sources

The selection of the literature sources is a critical step in conducting a literature analysis using text mining (Ramos et al., 2019). There are alternative academic search engines to query for publications. Three of the most widely used are ISI Web of Science (WoS), Scopus, and Google Scholar (GS) (Harzing & Alakangas, 2016). The latter provides a free service for retrieving publications from multiple sources, while the first two are indexing databases for a collection of specific sources. GS indexes every section of the text, while WoS and Scopus only consider the freely available sections, namely, the title, the abstract, and the keywords.

By encompassing a larger number of sources and including the whole manuscript leads, GS can retrieve exponentially more results per search query. However, some articles' sections, such as the references, may result in papers being wrongly associated with keywords from the titles of the cited references, thus misleading researchers (Moro et al., 2015). In contrast, Scopus allows the gathering of a reduced set of articles compared with GS since it does not look at the searched keywords in the reference section while covering a larger number of sources compared to WoS (Abrizah et al., 2013), but this comes at the cost of missing relevant articles if the search words do not appear in the indexed sections. This aspect is particularly true in instances where a globally accepted definition of the subject of interest, covering all its dimensions, is lacking.

As discussed in the previous section, the literature does not offer an unambiguous definition of an EMB, with researchers struggling to deal with many issues and challenges (e.g., Piperopoulos, 2010). For the present research, both GS and Scopus were queried using a combination of words (such as "ethnic" and "entrepreneurship", "minority", and "business"). In the Scopus database, Boolean operators were applied in the search string in the advanced

search field. The search was limited to Title-Abstract-Keywords and journal articles since the most influential and ground-breaking studies are published in journals rather than in other outlets (Rita & Ramos, 2022; van Raan, 2005). The outcome revealed 256 articles. In turn, the same terms were applied in GS using the same query, and the search returned 16,900 articles since GS searches the entire paper, including references. No time restriction was set in both databases in the article search to cover all published literature, with the oldest article found dating back to 1962.

The aggregated result provided 17,156 articles. Three authors conducted a manual analysis to eliminate duplicates and articles not related to the topic of this study by scrutinising each article's abstract. The procedure is shown in Figure 1, starting from literature selection and retrieval and finishing with knowledge extraction from the literature, including the automated text mining analysis method.
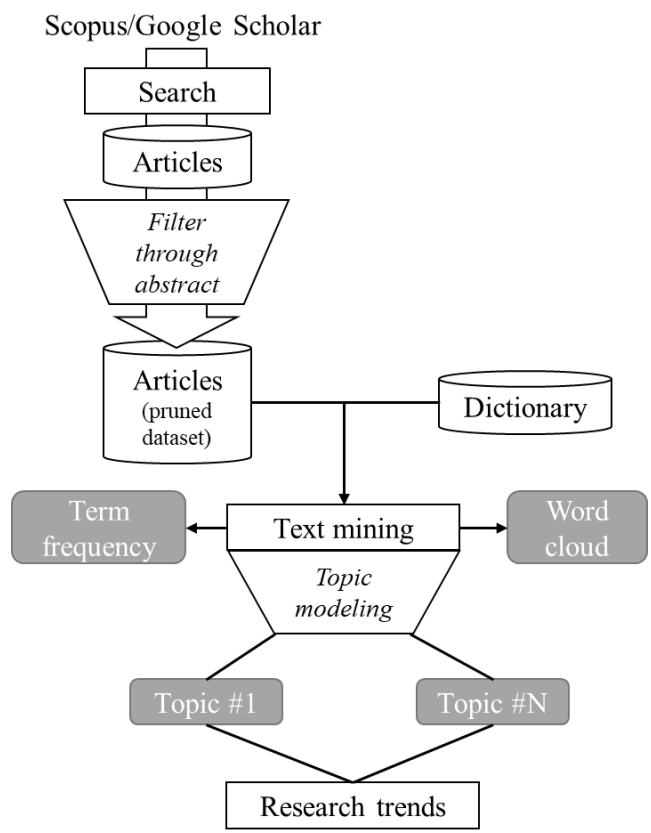

Figure 1 - Adopted procedure.

The querying procedure identified a total of 188 articles, a number comparable to previously conducted literature analyses adopting an automated analysis approach, as in the case of Moro et al. (2015). Adopting an automated analysis approach can further be justified as it reduces the time needed for manually reading all the articles and the inherent subjectivity of manual analysis. The present analysis includes the complete text, except the reference list of each identified article. Therefore, the recurrence of a theme within an article is assured.

Summing up, the approach adopted in the present study has two major advantages over a manual analysis, namely objectivity and scalability. Objectivity relates to circumventing human judgment biases in categorising literature, which usually requires more than two expert assessments to solve ambiguity issues (Moro et al., 2015), while scalability means that the procedure is directly reproducible for more extensive samples of articles without additional human effort.

Approach for analysing the relevant literature

The relevancy of the literature is operationalised by controlling the appearance and recurrence of particular words or combinations of words commonly understood to pertain to the topic of analysis (Ramos et al., 2019). The number of different words that appear within an article can be immense, which is amplified if all the different words from all the analysed documents are considered.

While it is possible to extract all the words from a document, this is generally of little use, considering some words do not hold significant semantic value. Hence, pronouns, adverbs, and prepositions are typically removed (Abdullah et al., 2017). In addition, since many of the extracted words will occur just a few times resulting in a sparse structure, removing the least

frequent words is justified, making the structure denser, which helps to guide knowledge extraction algorithms in finding patterns (Ramos et al., 2019).

An alternative approach to assessing the relevancy of the literature is to use pre-defined dictionaries directly related to the subject being studied (Moro et al., 2017). This approach circumvents the abovementioned limitation of indiscriminately searching for all words since only those specifically identified within the dictionary are selected. Additionally, words can be directly combined into terms of n-words (often called n-grams) that represent meaningful expressions concealing increased semantic value compared to individual words. For example, "ethnic entrepreneur" immediately identifies the research subject, while just finding "ethnic" or "entrepreneur" may not be sufficient. However, the subjectivity inherent in deciding which terms are relevant to a given subject poses serious challenges, as a poorly defined dictionary can bias the subsequent analysis, a problem that can be side-stepped by relying on an expert judgment (Moro et al., 2015).

In the present study, the chosen approach was to define the dictionary based on the most relevant terms identified from existing literature. Following the approach used in previous studies (Ramos et al., 2019) and in light of the absence of an agreed definition accepted by most of the relevant literature, a panel of three independent experts in marketing, entrepreneurship and management reviewed a first draft of the dictionary, after receiving the information concerning the study's purpose. The experts had the freedom to add or delete terms. The discussion between experts led to a consensus on which terms were most appropriate, considering the aim of this study. This procedure enabled the reduction of the inherent subjectivity associated with creating such a dictionary (Ramos et al., 2019).

Moreover, it facilitated more articles to be identified by containing more common terms that aggregate those articles into coherent topics. Also, such a set of terms does not contain the

obvious terms that all the selected articles already contain (e.g., "ethnic group", "ethnic community", "ethnic network", "migrant business"), which led to identifying them as relevant to be encompassed in the set of selected articles. Table I shows the terms chosen for the dictionary.

<div align="center">Table I about here</div>

Using topic modelling

The body of knowledge encompassed in all the selected articles was summarised using topic modelling, following the procedure adopted by Upreti et al. (2016) and Moro et al. (2017).

Topic modelling is a natural language processing advanced statistical method for text analysis. It is an unsupervised machine learning technique that can scan a large set of documents to find groups of words that often appear together, relating them to a topic (Blei et al., 2003). The words reflected in a topic show what the topic is about. Two types of relations characterise each topic: the link to each of the terms considered; and the relation of each document to each of the computed topics (Blei, 2012; Blei et al., 2003). While several topic modelling algorithms are available, the popular latent Dirichlet allocation (LDA) was adopted for this study because of its yielding insightful results when adopted for similar literature analyses of business intelligence in banking (Moro et al., 2015) and tourism (Moro et al., 2017). LDA is a three-level hierarchical Bayesian model used to model collections of discrete data, such as text (Blei et al., 2003).

All the analyses reported in this research were conducted using the R statistical tool, which is open source and admits various packages designed for data analysis tasks (Cortez, 2014). The R software environment offers an intuitive scripting language that enables programming scripts for various data analysis tasks. In our case, we included the packages needed through the

"library" instruction. Then, the dictionary was uploaded into the R script. Finally, the script invoked specific functions from packages that enabled producing the required outputs. Specifically, both the "tm" and "topicmodels" packages were chosen, as these offer the required functions for text mining and topic modelling (Ramos et al., 2021). The "tm" package allows the extraction of text terms into a document term matrix, while the "topicmodels" package implements the LDA analysis, which is useful to summarise the findings. The document term matrix is a bi-dimensional representation of the articles and terms and is used as an input of the LDA.

The output of the LDA is a three-dimensional structure encompassing the topics, articles, and terms. Through this structure, it is possible to observe which topic conveys it better for each article. Moreover, the distance between topics and terms was computed through a β distribution value. A β closer to zero indicates a stronger topic identification by the corresponding term (Ramos et al., 2019).

Results and discussion

Figure 2 shows the distribution of the identified articles across 57 years, starting in 1962, when the first selected article was published. Prior to 1982, only two articles focusing on EMBs were identified, and research activity remained at a low level from 1982 to 1995, with some years being conspicuous for the lack of relevant research. Research activity increased exponentially across every domain after 1995, leveraged by online databases and the emergence of new sources (Larsen & von Ins, 2010).
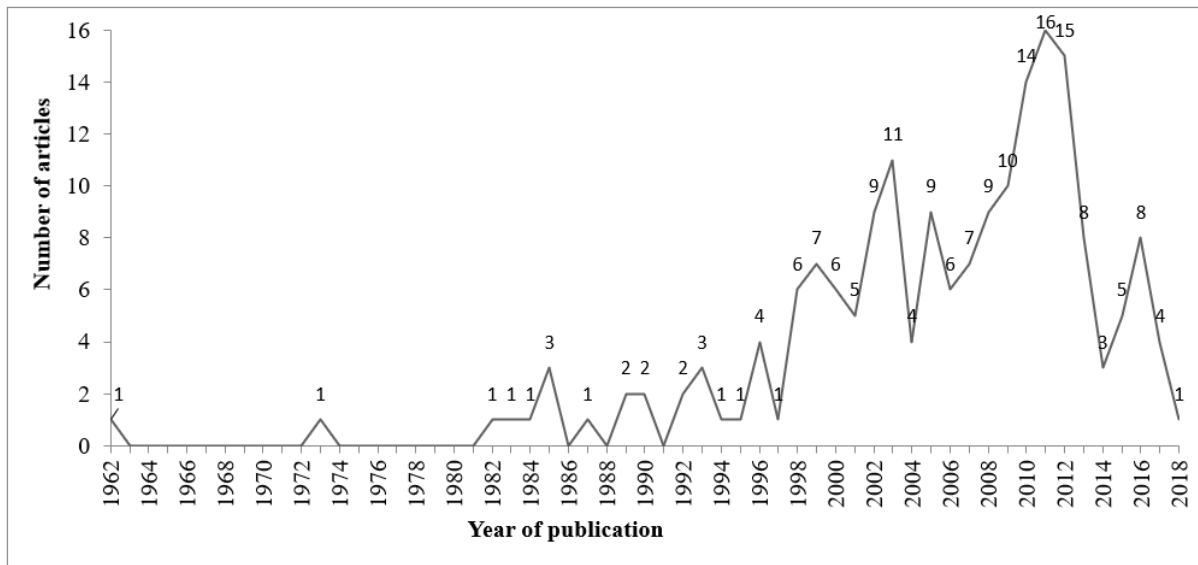
Figure 2 - Timeline distribution of the selected articles.

The new millennium brought a further increase in the number of publications. After 2008, the global financial crisis fuelled entrepreneurial efforts to deal with new challenges pushing businesses towards innovation and mobility to survive in a more competitive environment (Hausman & Johnston, 2014). This phenomenon was especially relevant for small and medium enterprises, such as EMBs, particularly those with tighter budgets, resulting in a marketing challenge. This aspect appears reflected in research arguments that the harsh environment caused an increased difficulty in obtaining funding and credit access that discriminated against ethnic minority entrepreneurs. Although EMBs are traditionally reluctant to invest time and financial resources in marketing, this period may have led ethnic entrepreneurs to take marketing more serious than ever before (Altinay & Altinay, 2008). This new approach may help understand the observed peak of published research between 2010 and 2013 (Figure 2).

Nevertheless, articles focusing on ethnic entrepreneurship in the UK revealed that, while EMBs experienced difficult access to credit, there was no evidence supporting discriminatory behaviour toward ethnic minority entrepreneurs (e.g., Haq, 2015; Lee et al., 2015). The

suggestion is that access to credit may be difficult due to EMBs' intrinsic characteristics (such as lack of planning, poor business skills, limited infrastructure, and a co-ethnic/family workforce). These are also the characteristics that limit success in EMBs access to large contracts offered by large purchasing organisations under the supplier diversity programs banner (Abe et al., 2015). When considering these challenges, it would be expected that EMBs would gear their marketing strategy toward product and price-oriented practices (Altinay & Altinay, 2008).

Table II identifies all 14 journals that published three or more articles, corresponding to 54% of all relevant publications. The numbers concur in the dispersion and diversity of the literature dealing with EMBs. The Entrepreneurship & Regional Development journal is the most relevant source, with 18 articles contributing to its publisher's overall relevance (Taylor & Francis). Each of the remaining 76 journals published less than three articles.

<u>Table II about here</u>

Most of the journals highlighted in Table II are related to entrepreneurship/small-business (e.g., International Small Business Journal) or migration/ethnic (e.g., International Migration Review) issues, denoting their titles and scopes. This element suggests that entrepreneurship from the perspective of EMBs, as is the case in this research, is a relatively narrow field of research, restricted to specifically related sources. One notable exception is Industrial Marketing Management; a journal focused on industrial/business-to-business markets, which contributes ten articles to the identified literature dealing with EMBs. Four articles were published after 2015, offering a relatively recent industrial marketing overview of the topic (e.g., Tian et al., 2018).

Term frequency is the simplest output from text mining, providing the needed numbers to quantify the literature (Table III).

The term "migration" is the most often mentioned among the 32 terms. The literature dealing with EMBs has a broad scope, including ethnic niches of business networks and entrepreneurship within the same region (e.g., Fairchild, 2009). However, immigration allied with an entrepreneurial component reflects a prolific context to study the specificities associated with EMBs, as the ethnicity-related divergences between hosts and foreign ethnic minority entrepreneurs emerge (Arbaci & Malheiros, 2010). Some authors conduct analyses interchanging both immigration and ethnic terms without distinguishing between them (e.g., Vinogradov, 2011). Unsurprisingly, immigration status recognisably plays a crucial role in developing EMBs. Analysis of the collected articles also highlights the importance of the relationships embedded in networks (whether formal, informal, social or business) by ethnic entrepreneurs (Lechner & Dowling, 2003; Rauyruen & Miller, 2007). EMBs' marketing strategies mainly focus on relationship marketing (Hasaballah et al., 2019). It is possible to acknowledge that closed ethnic minority networks reveal social ties, more interactions, and personal relationships. However, in the EMB context, relationship marketing is more of a business culture than a planned marketing strategy (Anwar & Daniel, 2016). Confidence in the quality and usefulness of this study´s results is strengthened by highlighting the term "human resources". This unsuspected finding reveals a trend dating back to the 1980s when Kim and Hurh (1985) evaluated the relevance of ethnic resources accessible through ethnic networks to foster the entrepreneurship of Koreans living in Chicago. Such a trend has further developed through time, encompassing different contexts. Drinkwater et al. (2009) studied self-employed Polish immigrants in the UK, while Fernández and Ortega (2008) evaluated immigrants' assimilation in the Spanish labour market context. Those studies adopted a human resources perspective to understand the role of the ethnic factor in the context of minority businesses and self-employment.

On the lower side of Table III, 'adaptation' (97 occurrences) contrasts with only eight occurrences for 'standardisation', which is expected, considering the specificities involving EMBs. This subject requires additional attention to small business marketing, especially for understanding how EMBs adapt the goods, services, and prices to reach local ethnic communities in different locations. Similarly, 'coopetition' is a common strategy generally used by large corporations (Soppe et al., 2014) but recurs only 31 times. This is less than expected, given ethnic entrepreneurs' natural engagement with the business and distribution network of their minority ethnic group of affiliation. This network is recognised as a powerful enabler of ethnic entrepreneurship (Lam et al., 2019) to overcome establishment difficulties.

The use of the LDA algorithm requires that the number of topics be imputed as a parameter. The number of topics was tuned and set to 10, following Moro et al. (2015) recommendations. The topics are presented in Table IV in a format similar to that used by Moro et al. (2017). The first column identifies the topics, numbered, and sorted in descending order relative to the number of articles that best match each topic, shown in the second column. Thus, the most represented topic is number one, with fifty-four associated journal articles. In turn, the least represented topic is number ten, with four articles. The next eight columns, grouped in pairs, show the four terms that best characterise each topic, and their β values, to provide a direct measure of the distance to the topic. A β value closer to zero means a strong correlation between the term and the topic. Finally, the last three columns show the distribution of the articles mentioned in the second column through the period covered by the study (1962-2018) in three distinct slots, the first up to 1997 and the next two of ten years (1998-2007, and 2008-2018). The selection for 1997 was due to the increasing number of papers published after this year (see Table II). The beginning of the third period was determined due to the global financial crisis that occurred in 2008, which had an impact on EMBs and transformed the overall business paradigm (Carter et al., 2015).

Table V was obtained according to Moro et al. (2015), and a careful examination of the most representative articles per topic confirms and complements the information in Table IV. For instance, the topic "immigrant entrepreneurship" is represented by the paper from Lo and Teixeira (2015). This work compares the experiences of immigrant and non-immigrant entrepreneurs, fitting perfectly in the four terms, confirming that this topic characterises part of the research on EMB.

Specifically, the chosen article is the one with (1) the larger number of different terms from the four that best characterise each topic (identified in Table IV) and (2) the highest frequency of the four combined characterising terms. Table V shows that all ten articles are identified with the four most related terms for each topic, providing evidence of the homogeneity of the computed topics, especially when compared to the study by Moro et al. (2015), which considered only three terms.

Table V also shows the citation number for those ten articles in Web of Science, Scopus, and Google Scholar indexing databases, the three most widely adopted scientific databases (Harzing & Alakangas, 2016) (with *NA* meaning the article is not indexed in the corresponding database). Although citations are influenced by both the journal title and the published year, it is possible to observe that most articles are highly cited, providing evidence of the relevance of each topic.

The topic "immigrant entrepreneurship" is devoted to migration, showing a moderate relation to three distinct trends: human resources, origin, and barriers. This constituent indicates that

migration is a vast subarea of research within the literature dealing with EMBs. This topic includes almost 30 per cent of research, supporting the previous discussion on the relevance of immigration. The selected article is the perfect fit for this topic, addressing immigrants' businesses in Canada through a discussion of the challenges they face and opportunities and strategies they adopt, including labour recruitment and human resources, ethnic origins, and regulatory and financing barriers (Lo & Teixeira, 2015).

The topic "family business" is also best identified with migration, culture, networks, and human resources. Danes et al. (2008) highlight that the four terms are related through a proposed sustainable family business theory. Both topics show how the EMB literature diverges from many related subareas, helping to support our claim on the difficulty in framing EMB research. Moreover, small family businesses constitute a large percentage of the worldwide economy (Kraus et al., 2020), which makes this subject a hot research topic from numerous perspectives. The third topic includes literature adopting a marketing approach towards EMBs, focusing on networks, and covering marketing, industrial, and strategies. This is a different yet highly relevant trend for EMBs. Entrepreneurial marketing strategies in small business marketing are highly associated with relationship marketing (Hasaballah et al., 2019). This topic suggests the relevance for EMBs to create and nurture a supportive network to keep their customers loyal, improving the business' performance (Chahal et al., 2016). Unlike transactional marketing, the focus of relationship marketing is to engage in several activities to build trust, goodwill, reputation, and positive word of mouth (Altinay & Altinay, 2008). However, it is essential to highlight that in the EMB context, relationship marketing practices seem more related to cultural practice than management practice (Anwar & Daniel, 2016). In the context of EMBs, the common practice is to develop sustainable relationships and invest in those relationships in the long term to maintain the entrepreneurs' ties with different stakeholders. Fostering EMB networks with partners outside the usual contacts might

contribute to strengthening the economic environment, enhancing creativity and innovation (Sithas & Surangi, 2021) and helping to integrate ethnic minorities into the community (Carter et al., 2015), reinforcing trust among partners.

Generally, research has increased steadily during the analysed period, with some interesting exceptions. Concerns regarding ethics and minority issues in the context of EMBs are the subject of the "minority culture" topic, having received less attention in the 1998-2007 period than in the two other periods. A culture of hostility and social exclusion is a practice that undermines the efforts to promote positive interaction between stakeholders (Creme, 2022), limiting the economic potential of EMBs. When facing this reality, policymakers could address cultural discrimination to prevent ethnic minority social exclusion aiming to promote a positive entrepreneurial culture (Jones et al., 2022).

Prior to 2008, the world thrived in relative prosperity, while the global financial crisis in the following years may explain additional difficulties in funding EMBs (Carter et al., 2015). Other relevant topics include the tight relationship between technology and markets (topic "entrepreneurial opportunities") and a topic highly related to human resources, which emphasises the previous discussion emerging from the frequency table (Table III).

Figure 3 consists of a conceptual model that visually summarises the main findings and offers a visual depiction. It identifies the direct relationship between each topic's most relevant terms in the collected body of knowledge, following the approach developed by Moro and Rita (2018).
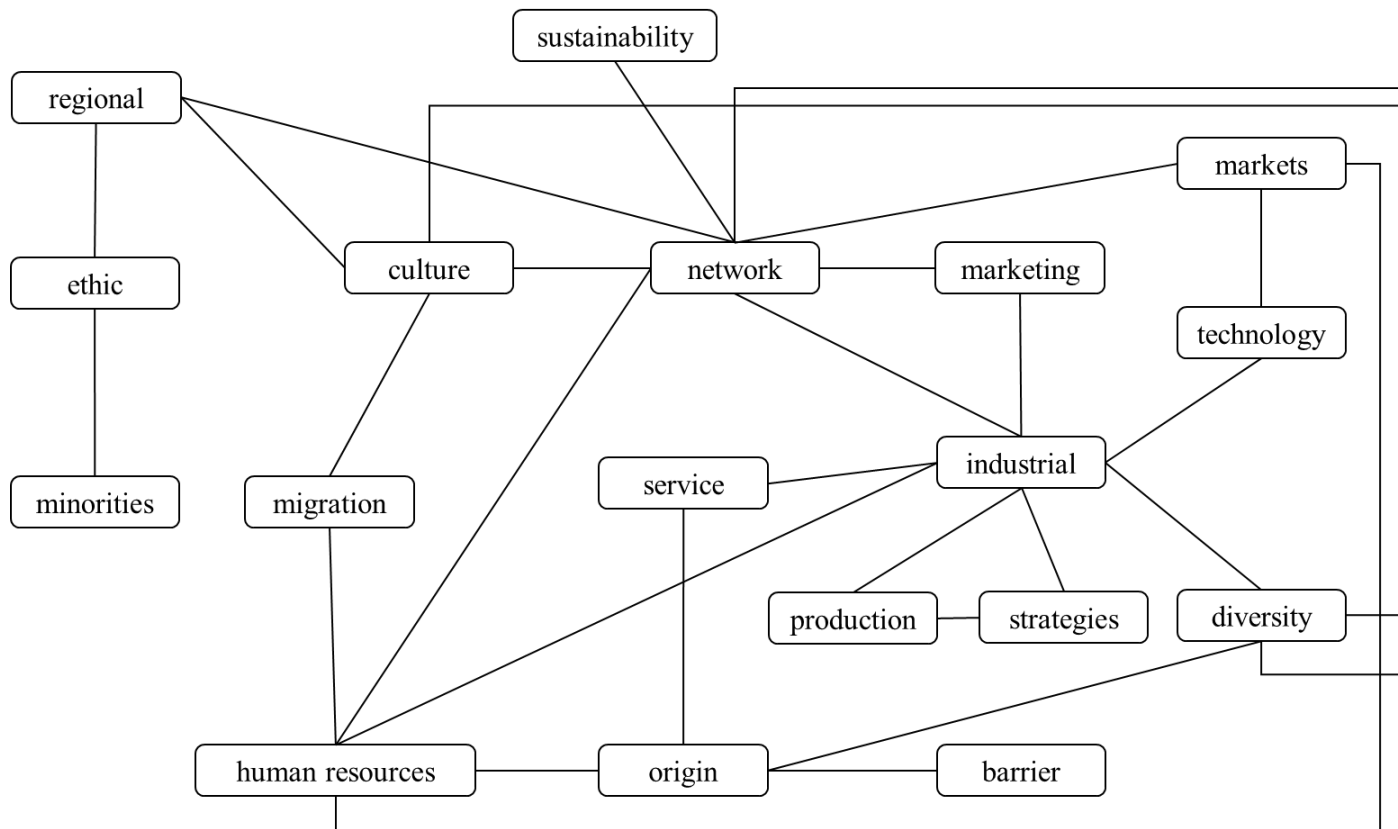
Figure 3 - Conceptual map summarising ethnic entrepreneurship.

The eighteen terms resulting from the ten discovered topics (see Table IV) provide support for the idea that a lack of a unique conceptualisation of ethnic entrepreneurs, ethnic entrepreneurship and EMBs transforms the narrow scope of the literature dealing with EMBs into a broader perspective that creates difficulty in establishing a closed frame that enables identifying its subdomains. As exhibited in Figure 3, the terms 'network', 'industrial', and 'human resources' have the most connections among the other highly relevant satellite terms, such as 'minorities' and 'barrier', revealing their relevance in the EMB research. This conceptual map characterises the EMB research, reinforcing the perspective that the diversity of topics addressed in the literature makes it difficult to find a clear definition of an EMB. For instance, the term 'industrial' is related to 'marketing', 'technology', 'diversity', 'strategies', 'production', 'network', 'human resources' and 'service', meaning that all these terms are relevant to the industry in the EMB context. This result is in line with Smallbone et al. (2005), who mention these terms in their research to understand the nature and extent of the involvement of Asian-owned industries. Furthermore, this visual map also enables us to understand that 'migration', the most mentioned word in the analysed articles (Table III), is narrowed to the first two (most expressive topics), providing evidence that it is a better-framed field of research within ethnic entrepreneurship.

Conclusions

This study consists of needed literature analysis of ethnic entrepreneurship research covering 188 articles published between 1962 and 2018. As a result, responses are provided to the research questions raised. The uncovered topics offer evidence of the scarcity of consistent framing of the literature, undoubtedly related to the lack of a universally accepted definition of what constitutes an EMB. Nevertheless, a dominant theme emerged as well-framed – migration - encompassing 93 articles, half the total. The remaining themes appear in an assortment of

topics related to a core composed of 'network', 'industrial', 'human resources', and 'diversity', orbited by several other themes related to both subjects that usually emerge as a by-product of ethnic issues such as 'culture', 'barriers', and 'minorities', and managerial issues such as 'market', 'strategies', and 'production'.

By identifying the main themes, the results also respond to the second raised research question (what are the main research gaps?) while pinpointing future research recommendations (the third question raised). First, there is a lack of framing of ethnic minority entrepreneurship outside the narrow but widely studied scope of migration and its impacts on EMB. Second, the adaptation versus standardisation effect has received little attention in the ethnic minority entrepreneurship context. This aspect is a critical path to be developed, as ethnic entrepreneurs face the marketing dilemma of either embracing products/services adapted for their target market based on their roots that help them differentiate from competitors or to adopt standardised products while offering more competitive prices and targeting ethnic networks (Collins & Low, 2010; Wang & Altinay, 2012). Other themes did not emerge as distinctly as some authors suggested, such as coopetition, a path usually followed by these entrepreneurs when establishing their business in new local communities (e.g., Bengtsson and Johansson, 2014) and participating in ethnic business networks.

Notwithstanding, perhaps the most obvious gaps highlighted by this study refer to the examination of:

1. how EMBs articulate with other businesses at the local, regional, national, transnational and even global levels; sustainable business support and integration with other businesses can leverage the economic potential of EMBs at different geographical levels. The connection between resource-rich networks that include financial institutions, civil

society, city councils, and the private sector may allow the creation of a positive dynamic toward success that will benefit the network and community (Creme, 2022).

2. evidence of the drivers and impediments to EMB participation in large organisations' networks; The creation of inclusive entrepreneurship long-term policies might lead to inclusive growth, long-term partnerships, and stronger networks (Ram et al., 2021). The support of relevant stakeholders is fundamental to promoting engagement and commitment between parties.

3. the support and training that can make EMBs take better advantage of the pathways to access mainstream and international supply chains; Business-specific training and support through partnership initiatives might increase the ethnic minority entrepreneurs' knowledge to become business leaders and develop sustainable businesses that support the community (Lam et al., 2019). Multiple training actions can be delivered through workshops (e.g., community integration), online courses (e.g., digital marketing), and support to grant projects (e.g., legal advice).

4. how EMBs articulate both with their minority ethnic group of affiliation and like businesses in that group's business networks. Lack of trust is one of the greatest barriers to engagement between an ethnic minority entrepreneur to engage with other companies and the economic sector. The proximity to other companies and economic sectors outside the EMBs network through relationship marketing may enhance the necessary trust to break the engagement barrier (Fuller et al., 2022). A positive relationship among stakeholders reduces uncertainty and increases exchanges between parties guided by relational norms (Coelho et al., 2022). It is surprising that more than 90% of EMBs in the UK are creditworthy but do not approach banks (Creme, 2022). A trust-based relationship with the general community is fundamental for achieving success (Verver et

al., 2019). A collective response is necessary to end the distrust between parts permitting side-by-side entrepreneurial success.

Limitations

Beyond the well-documented limitations of research dealing with big data-related issues (Sivarajah et al., 2017), this study has limitations of its own. Given the lack of a consistent framing of ethnic entrepreneurship literature, the selected articles may not encompass every article on the subject of interest. The absence of a universal definition/conceptualisation of an EMB may create comprehension challenges. These conundrums establish some ambiguity on whether the articles used and their respective findings contribute to the incremental learning of the topic of interest or whether relevant literature is not considered. Moreover, although experts reviewed the dictionary, there will always be an inherent subjectivity associated with this activity. The application of an automated text mining analysis approach provides an excellent start to the critical evaluation of the relevant literature. However, it does not invalidate the need to carry out a systematic literature analysis and categorisation, particularly given the relatively large number of articles that need examination.

Research directions

This intensive review makes a significant conceptual addition to ethnic entrepreneurship and small business marketing researchers, particularly on EMBs literature, by identifying research gaps and future research paths. The unveiled themes identified in this study provide the basis for better framing ethnic entrepreneurship and small businesses, starting with adopting one conceptualisation that allows for incremental knowledge generation. If done properly, it may help unify related literature under a common umbrella that helps researchers quickly identify lines of research.

The need to distinguish between 'migrant entrepreneur' and 'ethnic entrepreneur' needs to be addressed since there appears to be an understanding that it depends only on time spent in the new country. How the two conditions articulate remains unclear. Aliaga-Isla and Rialp (2013) suggested that this field's theory-building and further qualitative studies are abundantly justified. Following a similar argument, the distinction between EMBs characterised by the philosophical and operational ties of the business to the minority community and its social and business networks needs to be examined relative to EMBs identified by the size of the investment that capital holders may make in a business venture. Can it be inferred that both approaches deal with businesses that face the same challenges?

EMB growth patterns also justify further study. Pires and Stanton (2018) suggest the examination of possible 'outgrowth thresholds' that may explain EMBs' voluntary discontinuation, not because the business ceases to operate, but because it outgrows its dependence on a minority ethnic group, loses its ethnic connotation and becomes 'just a business'. The ethnic entrepreneur may decide the loss of the ethnic minority qualifier in attempting to hide that characteristic when breaking out (expanding) into new markets (such as the mainstream) (Smallbone et al., 2005). However, breaking out of co-ethnic customer markets is neither necessary nor sufficient for entrepreneurial expansion (Basu, 2011). Becoming "just a business" no longer complies with the conditions defining EMBs.

Finally, understanding the motivations and restraints of ethnic entrepreneurs and the impact of relationship marketing to enhance the proximity between EMBs and other companies outside their usual contacts (Addison et al., 2017; Hasaballah et al., 2019) are topics that demand the creation of knowledge to better ascertain ethnic entrepreneurship and small business marketing in this particular context.

As such, scholars can use this valuable knowledge to redirect their research and use this as an immediate reference to develop their work. Moreover, future research based on this investigation can increase the knowledge about ethnic entrepreneurship and small business marketing towards creating more opportunities for ethnic minorities, as they are vital to the community's economic growth and prosperity (Chahal et al., 2016; Fuller et al., 2022).

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