

Mapping the evolution of workers' buyouts: From crisis response to strategic succession

Marta Enciso Santocildes^{1,*}, Leandro Martín Ferrón¹,
Gabriel Vela Micoulaud¹, Aitziber Astarbe Aldasoro¹

¹ EDISPe (Social Development, Economics, and Innovation for People), Faculty of Law, University of Deusto, Spain.

* Corresponding author

Email: marta.enciso@deusto.es. ORCID: <https://orcid.org/0000-0002-1862-6875>

ABSTRACT

Objective. The objective of this study was to map the intellectual structure and historical evolution of research published between 1961 and 2024 on the topic of workers' buyouts (WBOs)..

Design/Methodology/Approach. A comprehensive bibliometric analysis of the academic field was conducted, starting with the identification of 5,302 entries and ultimately resulting in a refined data-set of 1,039 documents selected from the main academic databases (Web of Science, Scopus, Google Scholar, and EBSCO). The application of semantic validation, Lotka's Law, Price's Law, and Bradford's Law resulted in the identification of patterns pertaining to author productivity, citation concentration, and journal distribution.

Results/Discussion. The results indicated a rapidly consolidating field, characterized by a small but influential core of highly cited authors and journals, along with a wide dispersion of peripheral contributions. While the field demonstrated strong internal coherence, the findings also discussed epistemic asymmetries, particularly in terms of geographic and linguistic representation.

Conclusions. The study's conclusion puts forth a series of recommendations for future research endeavors, with the aim of diversifying the field's theoretical and empirical foundations. The study underscores the significance of aligning scholarly research more closely with the emancipatory potential of WBOs.

KEYWORDS: workers' buyouts; business succession; social economy; bibliometric analysis.

1. INTRODUCTION

WORKERS' buyouts (WBOs) have gained increasing relevance in recent decades as mechanisms for ensuring the continuity of viable enterprises in contexts where traditional

forms of business succession (particularly generational replacement) are absent or unfeasible. Typically involving the collective acquisition of a firm by its employees, WBOs not only prevent business closure and preserve employment but also restructure ownership and governance

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toward more democratic and participatory models. Accordingly, they exemplify a paradigmatic instance of hybrid institutional arrangements that integrate market operations with principles of the social economy, including collective interest, co-determination, and primacy of labor. The concept of WBOs is situated at the intersection of several research traditions, including labor studies, cooperative theory, entrepreneurship, and industrial policy. While WBOs were initially studied as emergency responses to corporate crises or insolvency, they are now increasingly understood as strategic tools for planned business succession, particularly in small and medium-sized enterprises (SMEs) and family firms lacking heirs. This transition has been accompanied by a significant increase in academic interest, which has been stimulated by the global financial crisis of 2008, the aging demographic of business owners, and recent institutional efforts to promote inclusive and sustainable economic models. Notwithstanding this expansion, the field remains fragmented, and no systematic mapping of its scholarly development has been conducted until now.

To address this gap, this study undertakes a comprehensive bibliometric analysis of the academic literature on WBOs and business succession. This study draws on a curated corpus of 1,039 scholarly documents published between 1961 and 2024. The objective of the study is threefold: first, to identify the field's conceptual consolidation; second, to determine the key contributors; and third, to examine the thematic evolution and structural dynamics. The dataset was meticulously assembled through targeted searches in four prominent academic databases: Web of Science (WOS), Scopus, EBSCO, and Google Scholar. These searches were executed using a refined matrix of keywords and semantic operators, ensuring a comprehensive and precise compilation of the dataset. The search strategy was validated through a combination of semantic analysis and factorial methods to ensure thematic coherence and conceptual relevance. Methodologically, the study applies a set of classical bibliometric laws (Lotka's Law, Price's Law, and Bradford's Law) to examine author productivity, citation concentration, and journal distribution, respectively. The utilization of quantitative tools

is further augmented by the implementation of network analysis, a methodological approach that facilitates the visualization of coauthorship patterns and citation hierarchies. Furthermore, the study incorporates temporal analysis to identify inflection points in academic production and to interpret these in relation to broader socioeconomic and institutional developments. This mixed-methods approach provides a robust framework for capturing both the internal structure and external stimuli that shape the WBO research landscape.

The manuscript is organized into six sections. Section 2 delineates the conceptual and historical underpinnings of WBOs, situating them within the broader discourse on business succession and social economy. As delineated in Section 3, the bibliometric methodology is meticulously explicated, encompassing the formulation of the search lexicon, the establishment of database selection criteria, and the implementation of document screening procedures. Section 4 presents empirical results, which encompass semantic validation, temporal trends, authorship patterns, citation concentration, and journal analysis. Section 5 provides a critical discussion of the findings, highlighting the consolidation of a scholarly core, the asymmetrical distribution of academic influence, and the underrepresentation of non-Anglophone and Global South contributions. Finally, Section 6 concludes with a reflection on the implications for future research. The authors call for more inclusive, interdisciplinary, and methodologically plural approaches to the study of WBOs. This study provides a comprehensive overview of the intellectual landscape of WBO scholarship and establishes the foundation for a more integrated and globally oriented research agenda. This study aims to encompass the full diversity of practices and conceptual innovations emerging within this evolving field.

2. THE WORKERS' BUYOUT AS A BUSINESS SUCCESSION MECHANISM

Contemporary societies face a number of challenges, one of which is business succession. This issue is especially pertinent in the context of SMEs, microenterprises, self-employed workers, and family businesses. This challenge is not confined to a specific economic sector or

geographic area; rather, it transcends industries and borders. These are situations in which businesses are left without successors after the owner's retirement. In other cases, successors exist but are either unwilling or unprepared to continue the activity. This may be due to a lack of the necessary skills or financial resources to undertake the transition. It is noteworthy that a considerable number of these enterprises are economically viable and attractive. In the absence of intervention, the inevitable consequence is business closure, leading to job losses and the erosion of productive and local economic and service ecosystems. A viable solution to prevent their disappearance and the associated negative consequences is for another individual or group to assume control of the business and continue its operation. These individuals may be external to the company or internal, that is, its workers. In the latter case, the business undergoes a transformation into a social economy enterprise, such as a cooperative or another legal form (e.g., *Sociedades Laborales* in Spain, SCOPs in France, social enterprise, etc.). This mechanism is formally referred to as a WBO. According to the extant academic literature, WBO is defined as a business succession mechanism in which employees become owners of the company, thereby shifting from wage labor to roles of co-ownership and co-management (Cornforth, 1983; Quarter & Brown, 1992; Vieta *et al.*, 2016).

Moreover, in the context of contemporary literature, WBO is characterized as a process of succession, whereby employees obtain most of the the company's equity, thereby transitioning from the role of mere workers to that of co-owners and active participants in management control. This process is typically financed through negotiated wage reductions in exchange for equity shares, which are then used as collateral to obtain additional funding (Cornforth, 1983; Di Stefano, 2018; Gunderson *et al.*, 1995; Monni *et al.*, 2017; Quarter & Brown, 1992; Vieta, 2016). A WBO is defined as a specific type of business conversion, representing a strategy for safeguarding enterprises and employment opportunities through the acquisition of personnel, frequently accompanied by subsequent reorganization into participatory frameworks, such as cooperatives or analogous legal structures (Vieta, 2016). This type of transaction

functions not only as a mechanism to prevent the closure of viable businesses but also as a means of restructuring business ownership on more equitable and democratic grounds. The practical manifestation of the foundational principles of the social economy is constituted by WBO. The primacy of labor, democratic participation, and orientation toward collective interest are the fundamental principles of the social economy. These institutions serve as a paradigmatic example of hybrid entities, integrating market logics with participatory governance structures.

In recent decades, the WBO phenomenon has gained increasing prominence. It has emerged as a key strategy to preserve viable enterprises, safeguard employment, and promote business models based on democratic participation. WBOs have been identified as effective instruments for enhancing social cohesion, revitalizing regions affected by economic restructuring, and promoting alternative forms of enterprise organization (CECOP-CICOPA Europe, 2013; Di Stefano *et al.*, 2023; Vieta *et al.*, 2016). The increasing relevance of WBOs can be attributed to a number of significant structural challenges, including the aging population within the SME sector, difficulties in generational succession, periodic economic crises, and the need to build more inclusive and resilient economies. In this context, WBOs are particularly valuable for ensuring the continuity of local businesses, preserving quality jobs, and democratizing business ownership. Consequently, they have become central to European strategies aimed at fostering the social economy and productive resilience (Fi-compas, 2025; European Parliament, 2013).

While historically associated with periods of crisis or insolvency, WBO has gained recognition as a strategic instrument for business succession, particularly in the context of family-owned SMEs facing a lack of successors. This phenomenon is a salient component of the business landscape in countries such as Spain and Italy (Di Stefano *et al.*, 2023; Mazzone, 2021). Indeed, recent studies have conceptualized a distinction between two primary causes leading to WBOs: business rescue, typically triggered by crisis or insolvency, and planned succession due to retirement without generational replacement (CECOP-CICOPA Europe, 2013; Di

Stefano *et al.*, 2023). While the former typically manifests in urgent and defensive restructuring scenarios aimed at preserving operations and maintaining employment (Gunderson *et al.*, 1995; Vieta, 2016), the latter provides an opportunity to strategically plan a change in ownership, offering considerable advantages for business stability and continuity (Jensen & Webb, 2020; Murphy *et al.*, 2017). The transfer is prepared in advance of the owner's retirement, allowing for a smooth and less disruptive succession process with higher prospects for viability and sustainability (Artz & Kim, 2011; Quarter, 2000). In the context of planned succession cases, the former owner may assume a facilitating or mentorship role, thereby facilitating the transition toward a new ownership structure. Therefore, WBO has evolved from ad hoc responses to business crises into strategic mechanisms for employment preservation, productive continuity, and democratized ownership in the context of business closure or succession.

Academic interest in WBOs began to attract growing academic and policy interest following specific national experiences—such as Spain's *Sociedades Laborales* in the 1960s (Chico Chico *et al.*, 1995), the Employee Stock Ownership Plans (ESOP) model in the United States (Vieta *et al.*, 2016), SCOPs in France (Mirabel, 2021), Italy in the 1980s (Vieta, 2015), Australia (Jensen, 2016), and Canada (Gunderson *et al.*, 1995). By the mid-1980s, cooperative scholars had identified worker takeovers as a “third stage” in the evolution of the modern cooperative movement (Conte & Svejnar, 1988). Toward the conclusion of the 1980s and the onset of the 1990s, a proliferation of more precise economic analyses emerged. For instance, Browning and Lewchuk's (1990) investigation into worker preferences involved a comparison of labor cooperatives with conventional private buyouts. Concurrently, country-specific studies commenced to document the early impacts of such operations: Gunderson *et al.* (1995), for instance, examined employee buyouts in 1980s Canada, demonstrating that WBOs had evolved from isolated cases into a recognizable phenomenon in North America and Europe. By the conclusion of the 20th century, the concept of WBO had entered the academic lexicon. Initially, it was focused

on individual case studies and the viability of employee-recovered firms. A multitude of studies have demonstrated that WBOs are frequently utilized as instruments to safeguard production and employment during periods of economic decline, thereby functioning as alternatives to bankruptcy (Monni *et al.*, 2017; Vieta, 2015). During the global financial crisis of 2008 and the subsequent recession, there was a resurgence of worker buyouts in severely impacted sectors and regions. These buyouts were aimed at saving viable businesses and protecting jobs (Vieta, 2015).

The academic field has gradually refined the concept and broadened its analytical scope. The study of WBOs has evolved to encompass diverse academic disciplines, including economics, sociology, labor studies, and organizational theory. Common terminologies and criteria have been developed to facilitate the description and analysis of the WBO phenomenon. A systematic review of the literature (Di Stefano *et al.*, 2023) confirms that the majority of recent scholarly work has focused on defining the phenomenon and analyzing its root causes, whereas internal stages of the conversion process have received comparatively less attention. This finding suggests that the WBO concept has been thoroughly theorized in terms of its nature and rationale. However, further exploration is necessary to elucidate its implementation dynamics and post-conversion outcomes. Therefore, WBOs have evolved from isolated mid-20th-century cases into a conceptually well-established phenomenon with clearly defined typologies. The historical origins of these concepts are intricately intertwined with labor struggles, while their earliest academic formulations emerged during the industrial transformations that characterized the late 20th century. The consolidation of this concept has facilitated the recognition of WBOs as legitimate economic and social policy instruments for business continuity, supported by an expanding theoretical corpus. The typologies identified, ranging from labor conflict to planned agreements and financial ownership schemes, reflect the diversity of pathways through which workers come to own their companies, thereby enriching the conceptual framework of WBOs in contemporary academic discourse.

3. BIBLIOMETRIC METHODOLOGY
AND DATA ANALYSIS PROCESS

Bibliometrics, a term coined by Paul Otlet in 1934, has emerged as a pivotal tool for quantitatively analyzing scientific literature and mapping academic production across diverse disciplines. The primary objective of this study is to assess the academic impact of publications or countries within specific fields and to explore the development of particular research areas. This analytical approach utilizes data, including publication counts, citations, authorship patterns, and publication sources, to discern trends and relationships in scientific literature (Gan *et al.*, 2023; Kirtania, 2023). The significance of bibliometrics lies in its capacity to offer an objective view of scientific output, enabling researchers to identify influential and emerging works within a given field. By meticulously examining the citation counts of scholarly works, researchers can assess the quality, relevance, and impact of these works. This analysis provides insights into the direction of future research and highlights potential collaborations between authors and institutions (Bornmann, 2014; Donthu *et al.*, 2021). Bibliometric studies also unveil authorship and collaboration patterns, providing insights into the dynamics of scientific production. A study of the 100 most frequently cited bibliometrics articles reveals a growing trend of collaborative authorship and publication across various journals. This phenomenon underscores the interdisciplinary nature of this research domain. Such studies facilitate the mapping of collaboration networks and the identification of key contributors to knowledge production (Kirtania, 2023; Yang & Meho, 2006). In the

context of WBOs and the formation of cooperatives or worker-owned companies, bibliometric analysis illuminates the academic focus on social economy models and their evolution over recent years. Researchers and policymakers can use this approach to identify influential works, key scholars, and major trends in the study of employee-owned enterprises, guiding further investigations (Bornmann, 2014; Gan *et al.*, 2023).

A comprehensive analysis of various searches was conducted, which culminated in the generation of an Excel database. In the initial phase of the research, the focus was on conducting comprehensive keyword searches within specialized databases that are renowned for their collection of high-quality scientific publications. The selection of databases included EBSCO, a leading provider specializing in the social sciences, business, and humanities; Google Scholar, which boasts a vast index of sources; and Scopus and WOS, widely regarded as the most prestigious multidisciplinary databases, renowned for their comprehensive indexing of high-impact academic journals. The keywords and expressions were searched in English, as it is the official language of the databases consulted. The sole exception was the term “empresas recuperadas,” which was deliberately searched in Spanish due to the significant impact of the Argentinian experience on both practice and academic literature. Although the translated expression “recovered business” is also widely used, authors more frequently employ the Spanish version to refer to this concept. A series of keywords was determined during a conceptualization session that involved a matrix of cross-referenced terms (Table 1)

Combinations		Outcomes	
Subject	Action	Retained terms	Discarded terms
<ul style="list-style-type: none">• employee/employees• worker/workers• staff• personnel• workforce	<ul style="list-style-type: none">• buyout• takeover• ownership• acquisition• purchase• buy in• buy back	<ul style="list-style-type: none">• worker buyout,• employee buyout• worker takeover,• employee takeover• employee ownership	<ul style="list-style-type: none">• personnel buyout, team buyout• staff takeover, personnel takeover• staff ownership• staff acquisition, workforce acquisition, team acquisition, employee acquisition, worker acquisition• employee buy-in, staff buy-in, worker buy-in• employee buy back, staff buy back, worker buy back• employee purchase, staff purchase, worker purchase

Table 1. Combinations of keywords for bibliometric search.

The search encompassed the concepts from Table 1, employing semantic operators to ensure that each keyword generated results that were closely aligned with the study's focus. A number of terms retrieved during the search process were excluded due to the presence of inappropriate or unnatural collocations in English. The utilization of such collocations has the potential to yield irrelevant or misleading results. In the final analysis, only retained terms that reflected meaningful and contextually appropriate combinations were considered. The utilization of quotation marks facilitated the retrieval of results that were directly related to the designated topic. Concurrently, the employment of the "+" operator constrained the search, thereby ensuring that the results were more precise. Conversely, the implementation of the "or" operator yielded searches that were excessively broad and imprecise. Consequently, in a subsequent phase, the queries were refined to discard those expressions that, despite initially appearing pertinent, were ultimately deemed irrelevant, as the results yielded were not consistent with the designated topic. For instance, "business continuity" refers to actions related to contingency and disaster management in a company's economic life. In a similar vein, the concept of "succession" was previously applicable exclusively in the context of continuity management within SMEs, as well as within family businesses.

Publications in which the term "succession" was used to refer to the transfer of power from one executive to another (CEOs) or broader themes such as political succession between regimes in different countries were excluded from the analysis. Furthermore, the incorporation of the term "sale" yielded a substantial number of unrelated results, pertaining to subjects such as the sale of products or services, rather than the sale of a company. With respect to the term "transfer of undertaking," which was expected to yield beneficial results, it was determined that this term was predominantly associated with labor aspects. Consequently, this term was excluded from further consideration. Following this analysis and terminological refinement, the relevant expressions were: *transfer + enterprise + employees*, *workers buyout + cooperative*, *worker-owned companies*, *empresas recuperadas*, *recovered*

business, *"employee buyout"*, *cooperative buyout*, *"conversion" AND "worker cooperative"*, *worker cooperative recovered*, *"recuperated factories"*, *"worker recuperated enterprises"*, *"business + transfers"*. The initial screening of search results from each database was conducted by examining the titles and abstracts, when applicable. Subsequently, duplicates within each database were removed and the results merged, generating 5,302 entries. Subsequent refinement of the database led to the elimination of cross-database duplicates, thereby narrowing the set to 3,721. A final review focused on thematic alignment, through abstract evaluation, led to a curated selection of 1,039 publications suitable for detailed analysis.

4. RESULTS

4.1. Semantic validation of the search strategy

The search query was validated through a semantic and factorial analysis of the retrieved documents following the objective of ensuring the thematic and conceptual relevance of the bibliographic records in relation to the key terms "business succession" and "workers buyout." A total of 1,082 documents were initially retrieved from various databases (WOS, Scopus, Google Scholar, and EBSCO), of which 1,039 were retained after removing duplicates. As illustrated in Figure 1, the semantic analysis reveals a striking congruence between the thematic content of the documents and the conceptual axes of the study, with over 98% of the documents exhibiting direct thematic correspondence. The high relevance rate was confirmed through a factorial matrix that integrated variables such as title, abstract, keywords, and term co-occurrence. This finding serves to reinforce the validity of the information retrieval strategy.

The semantic approach, when complemented by confirmatory factorial analysis techniques, has been extensively validated in the scientific literature as a method for assessing thematic coherence and structure in bibliometric studies (Jiang *et al.*, 2023; Yang & Meho, 2006). The integration of lexical similarity analysis and term categorization has been demonstrated to be a highly effective approach for identifying thematic clusters and delineating emerging

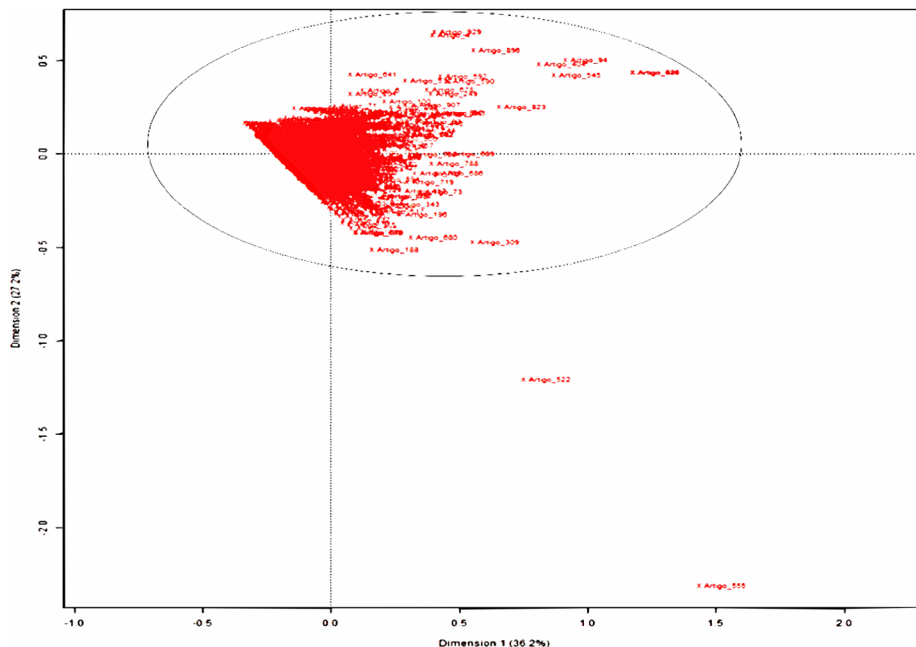


Figure 1. Semantic application of the documents and confirmatory factorial analysis.

lines of research (Li *et al.*, 2023; Zhao, 2022). This process enabled the identification of a clear concentration of topics related to business succession processes, worker participation in business ownership, and collective acquisition mechanisms for organizations at risk of closure or lacking family succession. These findings not only substantiate the efficacy of the descriptors employed but also fortify the empirical underpinnings of the study, thereby directing subsequent analyses toward a robust interpretation of research trends and prevailing theoretical nodes in the specialized literature.

4.2. Temporal analysis of the retrieved documents

From a methodological perspective, temporal analysis constitutes a pivotal instrument in bibliometric studies. It facilitates the tracking of thematic evolution, the detection of emerging trends, and the assessment of the maturity of a scientific field (Li *et al.*, 2023; Ling *et al.*, 2023). This longitudinal perspective is imperative for comprehending not only the volume of output but also the critical moments in which academic and political interest in the phenomenon is reconfigured. A temporal analysis of the retrieved documents reveals the evolution of scientific interest in the topics of “business

succession” and “workers buyout.” The historical series encompasses the period from 1961 to 2024, though it should be noted that publications from the most recent year are still in progress. This timeframe indicates a progressive increase in scientific output, with notable publication peaks in 2016, 2019, and 2023. These peaks may be indicative of broader economic trends, particularly the heightened significance of business succession processes and cooperative forms of productive restructuring within global economic contexts (Figure 2).

Since 2015, research on WBOs has seen a notable increase, particularly marked by distinct surges in 2016, 2019, and 2023. Each of these peaks can be interpreted as a response to specific socioeconomic factors that have stimulated scientific interest in this area. The surge in publications during 2016 is often attributed directly to the aftermath of the global financial crisis that began in 2008. This unfavorable economic climate led to an increased emphasis on alternative strategies for business continuity, with a particular focus on the recovery of businesses by their employees. Ruggeri and Vieta's (2015) study offers a comprehensive analysis of worker-recovered enterprises in Argentina between 2010 and 2013, emphasizing their role in maintaining social and economic cohesion in regions grappling with high rates

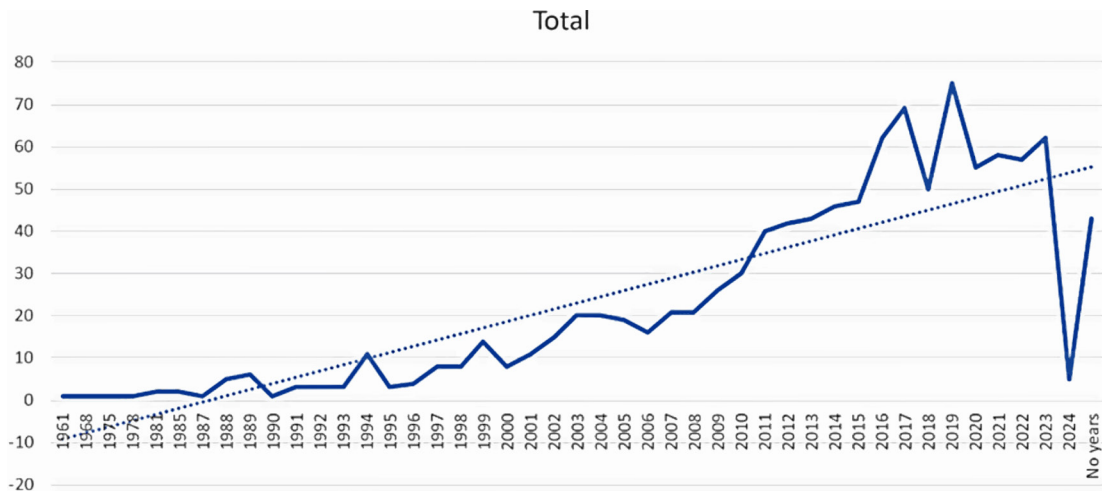


Figure 2. Distribution of scientific articles by year of publication.

of unemployment. Concurrently, Vieta (2015) analyzed the implementation of Italy's Legge Marcora, illustrating how this legislation protected approximately 2,500 jobs by facilitating the creation of worker cooperatives. Additionally, Forno and Graziano (2016) presented case studies of Italian cooperatives established after industrial conflicts, highlighting their role in local economic revitalization. Meanwhile, Savolainen (2016) examined the psychological and organizational experiences of non-family employees involved in business succession processes. Monni *et al.* (2017) further extend this perspective by documenting over three decades of WBO experiences in Italy (1986-2016), highlighting the model's remarkable resilience and adaptability across multiple economic cycles.

In 2019, the sustained academic interest is interpreted as a logical extension of earlier attention, driven more explicitly by mounting concerns regarding the aging of entrepreneurs and the dearth of generational succession in Europe. This demographic phenomenon has been documented in reports such as the Ageing Report 2018 by the European Commission (2018), which underscored the rise in the aging business population and the shortage of generational replacements. Bassi and Fabbri (2019) presented empirical evidence from the Italian region of Emilia-Romagna. Their findings indicated that worker-recovered companies exhibited greater resilience during crises, with significantly higher survival rates compared to traditional firms. The most significant increase observed in 2023 is closely linked to

substantial international institutional support. The European Action Plan for the Social Economy (European Commission, 2021) explicitly recommended that member states facilitate financial and technical support for business transfers to employees. This institutional context was further strengthened by subsequent initiatives, such as the Council of the European Union Recommendation (October 2023), which urged the development of specific regulatory frameworks favorable to WBOs. Additionally, the UN Resolution on Social Economy and Sustainable Development (2023) and the OECD Recommendation on Social and Solidarity Economy (2022) significantly enhanced global recognition of worker cooperatives as strategic tools for sustainable development. In this auspicious context, Di Stefano *et al.* (2023) undertook a systematic review of over 40 studies on WBOs, synthesizing extant research and proffering prospective directions. Meanwhile, Mygind (2023) conducted an analysis of how international regulatory variations impact the sustainability of WBOs. These contributions have been interpreted as indicative of a process wherein WBOs have transcended their reactive function during specific crises to become strategic subjects of academic research and public policy internationally.

4.3. Distribution and typology of sources

With respect to document types, the 1,039 records retained following deduplication are distributed across a wide variety of formats. The

majority of the documents are scientific journal articles ($n = 647$), followed by academic theses ($n = 144$), book chapters ($n = 86$), conference papers ($n = 60$), full-length books ($n = 49$), technical reports ($n = 27$), and other minor categories such as editorials, book reviews, author responses, and technical notes. This documentary diversity suggests an interdisciplinary and consolidating field, combining traditional academic contributions with emerging or institutional formats. The incorporation of typological diversity introduces a qualitative dimension to the analysis, thereby unveiling the multifaceted processes involved in the production, validation, and dissemination of knowledge within the field (Zhao, 2022). In this sense, the predominance of journal articles serves to confirm the formalization of the field within established academic circuits. The presence of theses and book chapters indicates a solid educational foundation and an expansion of the topic in graduate programs and applied research. This preliminary characterization of the documentary base facilitated more intricate analyses pertaining to author productivity (Lotka's Law), visibility and impact (Price's Law and the h-index), and the semantic structure of the field (Zipf's Law). Furthermore, two complementary studies were conducted. The first study focused on co-authorship networks to identify collaborative relationships among researchers. The second study involved lexicographic analysis of the abstracts. The objective of this analysis

was to recognize textual patterns, categories of terms, and discursive similarities within the analyzed corpus. These analyses will be further elaborated in the subsequent section.

4.4. Authorship productivity analysis

In the course of the authorship analysis, Lotka's Law was implemented to ascertain the most prolific researchers within the thematic corpus on "business succession" and "workers buyout." In accordance with Lotka's Law, the number of authors publishing n papers is inversely proportional to the square of n . That is to say, a small number of authors account for a large portion of the output, while the majority contribute with only a single publication. This empirical regularity is widely employed in bibliometric studies to examine the distribution of scientific productivity within a given research community (Egghe, 2005; Pao, 1985). In this study, a total of 1,618 unique authors were identified. To apply Lotka's Law, a cutoff criterion of 20% of the total was used ($1,618 \times 0.20 = 323.6$), resulting in a sample of 323 authors. This group of researchers accounted for 36.39% of the total systematized output, with 741 attributed publications out of an overall sum of 2,036 author appearances (i.e., counting all co-authorship occurrences).

As illustrated in Figure 3, the application of Lotka's Law is evident in the distribution curve, which is predominantly comprised of

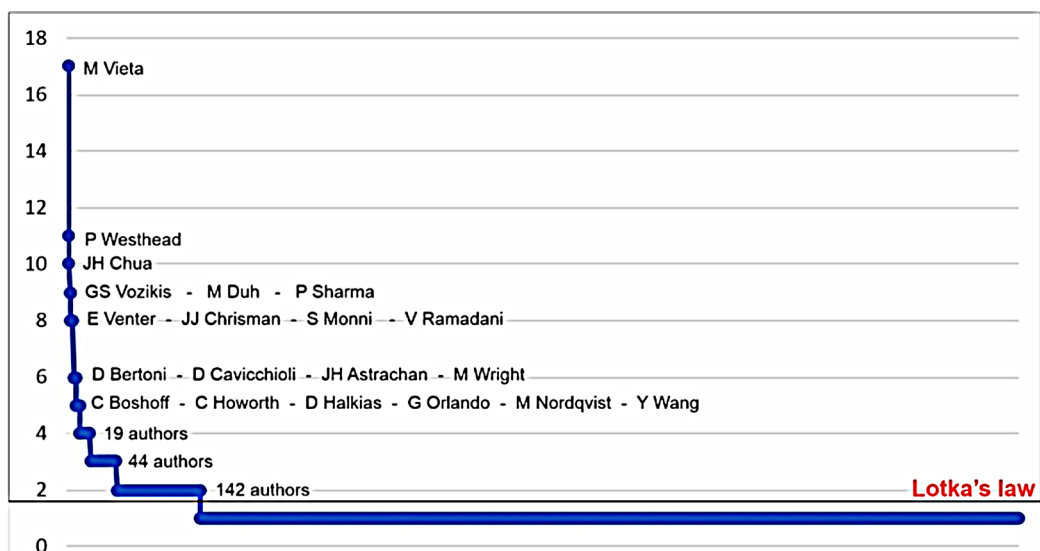


Figure 3. Representation of authors according to Lotka's Law.

authors with a limited number of publications, specifically one or two. A smaller, more productive segment of authors—led by M. Vieta with 17 publications—accounts for a substantial share of the total output. Other frequently occurring authors include P. Westhead and J.H. Chua, each with 10 publications, followed by G.S. Vozikis, M. Duh, and P. Sharma, each with 8 publications.

This distribution closely follows the theoretical slope predicted by Lotka's Law, thereby reinforcing the internal consistency of the analyzed corpus and suggesting the existence of a consolidated and active authorship core within the field. A finding of this nature also establishes a basis for the subsequent identification of potential leading authors for further stages of analysis. Such subsequent stages of analysis may include co-citation mapping, collaboration network modeling, or academic impact assessments. Within the scope of this study, it is worth emphasizing that identifying this core group of authors is not only relevant for academic visibility purposes but also due to their

role in shaping the scientific discourse around business transitions and collective succession processes.

As illustrated in Figure 4, the co-authorship network is derived from the analysis of 1,039 selected documents. This confirms the correlation between productivity, visibility, and influence within the domain. A more thorough examination reveals that prominent figures, including J. H. Chua, P. Sharma, J. J. Chrisman, P. Westhead, and J. H. Astrachan, stand out in terms of both the volume of their publications and their network centrality. In particular, J. H. Chua (with a total of 7,084 citations) and P. Sharma (6,105 citations) are noteworthy not only for their high citation counts but also for their extensive collaborative links, which serve as key hubs of scientific dissemination. In a similar vein, J. J. Chrisman (5,845 citations) and J. H. Astrachan (2,031 citations) have been shown to possess high betweenness centrality, thereby playing a significant role in the consolidation of academic communities and the articulation of shared research agendas.

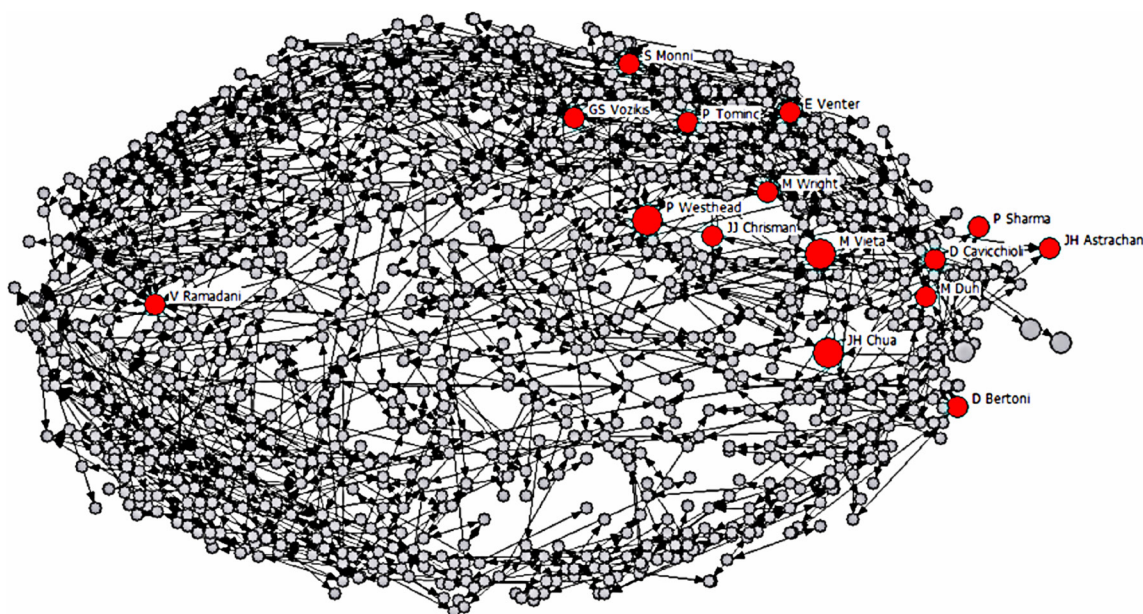


Figure 4. Network of co-authorship relationships.

From a structural standpoint, the network evinces hallmark characteristics of complex systems, including high local density, multiple connection pathways, and an uneven distribution of centrality. These

properties reflect a balance between internal cohesion and collaborative openness, both of which are conditions that foster the robust and sustained production of knowledge over time.

4.5. Citation analysis

The collaborative behavior of the most cited authors corroborates their dual role as knowledge producers and field-shaping agents. However, Figure 5 reveals a pronounced concentration of citations. A small group of authors accumulates a disproportionately high number of citations,

while the majority remain below the threshold of visible impact. Specifically, the data demonstrate that 97.71% of all citations are concentrated among a mere 575 authors, representing approximately 35.5% of the total number of identified authors ($n = 1,618$). This high concentration of scientific visibility is indicative of a highly hierarchical and polarized bibliographic structure.

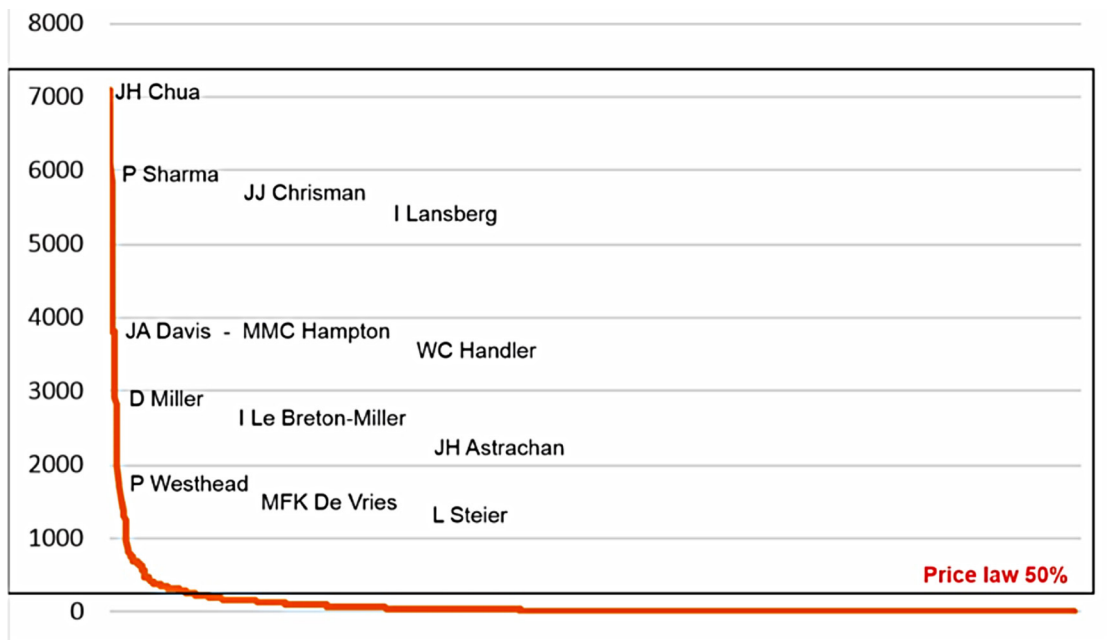


Figure 5. Graph of representation of the citations by Price.

The most frequently cited authors—including J. H. Chua (7,084 citations), P. Sharma (6,105), J. J. Chrisman (5,845), I. Lansberg, and J. A. Davis—represent the foundation of the extant literature on business succession and WBOs. These scholars not only lead in terms of research output, as shown in the Lotka-based productivity analysis, but also exhibit significant epistemic authority as a result of their impact on the academic community. This dual condition of high productivity and high citation places them in a position of considerable responsibility, as their influence may shape emerging research agendas and contribute to the consolidation of dominant interpretive frameworks within the field.

4.6. Journal analysis

To identify the primary sources of publication within the field, an analysis was conducted

using Bradford's Law. This law posits that, within a given area of knowledge, a small number of journals account for approximately one-third of the relevant articles, while the remaining literature is exponentially scattered across an increasing number of less specialized journals (Bradford, 1934).

As illustrated in Figure 6, the most productive core consists of a small set of journals that collectively account for approximately 33% of the total publications on “business succession” and “workers buyout.” It is noteworthy that *Family Business Review* is regarded as the predominant academic publication in this field, having indexed over 45 scholarly articles. The *Journal of Family Business Management*, *Entrepreneurship Theory and Practice*, and the *Journal of Small Business and Enterprise Development* are also noteworthy publications, each publishing between 10 and 25 articles on the subject.



Figure 6. Distribution of scientific journals according to Bradford's Law.

The substantial concentration of publications within this select group of journals substantiates the existence of a cohesive thematic specialization concerning entrepreneurial succession dynamics, notably within family-owned or participatory business contexts. The existence of this central core facilitates academic visibility, methodological standardization, and the cumulative development of knowledge within the field (White & McCain, 1989). Conversely, the remaining corpus is disseminated in a relatively dispersed and sporadic manner across a substantial number of journals, with many of these publications containing a mere one or two contributions relevant to the subject matter. This pattern of dispersion is characteristic of interdisciplinary fields, where diverse perspectives—ranging from economic sociology to public administration—address the issue of business succession in a fragmented manner.

5. DISCUSSION

The bibliometric methodology and search strategy employed in this study reflect a rigorous and conceptually grounded approach to capturing the scientific landscape surrounding WBOs. The study employs a triangulation approach, integrating searches from

EBSCO, Scopus, WOS, and Google Scholar. A refined lexicon is constructed, prioritizing conceptual clarity over mere frequency. This methodological approach ensures the precision and thematic relevance of the dataset. However, the process of term exclusion (e.g., “transfer of undertaking” or “sale”) and the focus on English-language sources, with the partial exception of “empresas recuperadas,” may have constrained the representativeness of non-Anglophone scholarship, particularly from Latin America and Southern Europe, where empirical experimentation with WBOs is pronounced. The discussion is enriched by the implementation of well-established bibliometric laws (Lotka, Price, Bradford), which offer substantiation of field concentration and network centrality. However, these laws also unveil a considerable asymmetry in scholarly influence. A comparison of this study with prior bibliometric studies in social economy domains (Ling *et al.*, 2023; Zhao, 2022) reveals the superiority of this study in terms of methodological filtering and the treatment of terminological inconsistencies. Nevertheless, future analyses may benefit from incorporating natural language processing (NLP) tools to detect latent semantic fields and interdisciplinary bridges. The findings of this study

carry significant implications for academic agenda-setting, policy frameworks, and the democratization of enterprise studies.

The semantic validation process exhibited an impressively high thematic coherence (over 98%), thereby lending strong internal validity to the search strategy and term selection matrix. Nonetheless, this very coherence gives rise to concerns regarding the possibility of overstandardization. Although terminological rigor is imperative for bibliometric precision, it has the potential to exclude novel or localized conceptualizations of worker-led succession—particularly those that are emerging in Latin America, Southern Europe, or Sub-Saharan Africa—where the language of “recuperated enterprises,” “solidarity economy,” or “worker-recuperated factories” often prevails. It is evident that, despite the inclusion of the term “*empresas recuperadas*” in Spanish, the database construction exhibits a predominant inclination toward Anglo-American epistemological frameworks. This bias potentially results in an oversight of critical regional perspectives that could contribute to the enhancement of the conceptual diversity within the field. A temporal analysis of the data reveals discernible peaks of academic output in 2016, 2019, and 2023, each traceable to specific macroeconomic or institutional stimuli. These inflection points serve to validate prior assertions that WBO scholarship undergoes expansion in response to systemic crises or regulatory innovation. This phenomenon has been documented in various studies, including those by Ruggeri and Vieta (2015), Forno and Graziano (2016), and Di Stefano *et al.* (2023), particularly in the context of Italy and Argentina. However, the longitudinal trajectory also indicates that WBOs are increasingly studied not only as reactive responses to crises but also as strategic instruments of planned succession and resilient entrepreneurship. This duality positions WBOs at the intersection of emergency recovery and proactive restructuring, a conceptual nuance that future bibliometric analyses could operationalize through thematic clustering or topic modeling.

The co-authorship network and citation structure further underscore the field's consolidation around a few prominent intellectual nodes. While this phenomenon may be

indicative of scholarly maturity, it could also be a manifestation of an ossified discourse, which might be resistant to pluralistic approaches or interdisciplinary engagement. This limitation is particularly salient in light of the fact that WBO intersects with myriad research traditions, including labor studies, cooperative theory, industrial policy, and organizational psychology. The network density depicted in Figure 4 suggests a high degree of internal cohesion. However, the absence of peripheral clusters indicates a limited integration of diverse epistemic communities or emerging scholars, particularly from the Global South. This imbalance has the potential to impede the development of research agendas that are more inclusive. A journal analysis reveals the emergence of a compact core of journals, with *Family Business Review* and *Journal of Family Business Management* occupying central positions, as confirmed by the application of Bradford's Law. While this development supports the formalization of the field within established publication venues, it also underscores the risk of thematic insularity. The dissemination of extant literature across a variety of low-frequency outlets indicates an episodic nature of interdisciplinary engagement, rather than a sustained cross-field dialogue.

The findings of this study illuminate both the strengths and the structural constraints of the current academic landscape on WBOs. The field of environmental economics benefits from a coherent theoretical foundation, a robust empirical tradition, and growing policy relevance. However, the field is also characterized by linguistic homogeneity, geographic concentration, and a disciplinary core that may impede critical innovation. In the future, the field would benefit from methodological pluralism, incorporating approaches such as qualitative meta-synthesis, participatory bibliometrics, and digital ethnography. These methodologies have the potential to unveil latent dynamics within underrepresented regions and illuminate emergent narratives that challenge prevailing frameworks. It is imperative to note that such strategies would align more closely with the emancipatory ethos of WBOs themselves, thereby enhancing the legitimacy and transformative potential of academic inquiry in this domain.

6. CONCLUSIONS

In conjunction with the partial conclusions delineated throughout the study in relation to the bibliometric analysis, this section presents the key general conclusions of the research. The study provides a thorough bibliometric mapping of the academic field of WBOs, situating them not only as mechanisms for business rescue during periods of crisis but increasingly as strategic and viable responses to the structural challenge of business succession, particularly in SMEs, family firms, and micro-enterprises facing the absence of generational continuity. By tracing the evolution of scholarly interest over time and aligning this trend with the growing theoretical development and understanding of WBO studies, the study's findings contribute to the consideration of WBOs as a consolidated research field. The analysis demonstrated that the initial publications on the subject appeared in indexed, high-impact journals during the mid-1960s. These publications exhibited a consistent, gradual evolution, with a notable increase in publications in 2016, 2019, and 2023. The existence of a correlation between the aforementioned peaks and distinct macroeconomic and institutional transitions has been demonstrated. This finding serves to substantiate the notion that WBOs have become a focal issue within the academic realm during periods of economic restructuring and policy realignment. These patterns underscore the dual role of WBOs as strategic instruments for maintaining employment during economic downturns and for facilitating planned succession processes. Additionally, they serve as vehicles for promoting employee-based governance and ownership. The fundamental function of WBO is to facilitate the transformation of conventional firms into cooperative and worker-owned enterprises. This process frequently coincides with struggles or resistance aimed at ensuring the sustainability of employment.

The bibliometric analyses indicate that a small yet prolific group of authors and journals exerts a dominant influence on the discourse, thereby shaping theoretical orientations and consolidating terminology. Although this concentration has contributed to conceptual clarity and academic legitimacy, a descriptive analysis of the data indicates that it may have resulted in a selective

framing of knowledge production, foregrounding certain ways of understanding while overlooking others. It is noteworthy that the analysis of co-authorship and citation networks indicates that, while the field exhibits high internal cohesion, it exhibits limited interdisciplinary permeability. This presents both a challenge and an opportunity, underscoring the necessity to cultivate connections with complementary disciplines such as labor law, public policies, organizational leadership, democratic workplace organization, and territorial embeddedness. By doing so, a more comprehensive and multilayered analysis can be conducted, one that captures the full extent of the phenomenon's complexity. In addition to these essential connections, the evidence underscores the necessity for further examination of several domains, including the internal dynamics of post-buyout governance, the longitudinal performance of worker-owned firms, and the comparative effectiveness of national policy frameworks, among others.

Conflict of interest

The authors declare that they have no conflicts of interest.

Contribution statement

Marta Enciso Santocildes: conceptual development of the study, refinement of the theoretical framework, validation of the bibliometric methodology.


Leandro Martín Ferrón: methodological design, execution of the bibliometric analysis, coordination of the manuscript writing process.

Gabriel Vela Micoulaud: data collection, construction of the bibliographic database.

Aitziber Astarbe Aldasoro: data collection, critical revision of the manuscript.

All authors reviewed and approved the final version of the article.

Statement of data consent

This study is based exclusively on bibliometric data retrieved from publicly accessible academic databases. No personal, confidential, or sensitive information was collected or processed. All data used comply with the terms and conditions of the respective data sources. 

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