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A knowledge-based perspective on the professionalization of SMEs:

A systematic literature review and future research directions

Abstract

Purpose – This paper provides a synthesis of theoretical and empirical work related to the professionalization of small and medium-sized enterprises (SMEs) from a knowledge-based perspective.

Design/methodology/approach – A systematic literature review consisting of three major steps of planning, conducting, and reporting is conducted. Articles are identified, selected, and deductively coded. Quantitative and qualitative methods are employed to analyze the articles. The finalized list includes 78 articles and 48 journals, with the oldest article published in 1980 and the most recent articles published in 2022.

Findings – The findings showed that the empirical works (n=69) outnumbered the conceptual works (n=9). Most articles focused on the organizational level of analysis and identified causal conditions, modes, intervening conditions, and consequences. A multidimensional characteristic of professionalization emerged inductively as an additional attribute.

Originality – This paper provides a synthesis of the current literature and offers a research agenda to academics and practitioners interested in the professionalization of SMEs from a knowledge-based perspective.

Keywords – organizational knowledge, professionalization, threshold, growth, knowledge management, systematic literature review, SMEs

Article type – Research paper

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Introduction

Over the years, management and organization studies scholars have shown increased interest in how organizations attempt professionalization—a process through which an organization is transformed into a “more formalized, structured, and institutionalized corporation” (Dekker *et al.*, 2015, p. 516-517; see also Chau and Wong, 2021, p. 265) through changes to its organizational structure, policies, procedures, practices, and resources (e.g., Polat, 2020; Heredia-Calzado and Duréndez, 2019).

Most of the research on how organizations attempt professionalization has focused on small and medium-sized enterprises (SMEs), including family-owned enterprises. The present study attempts to understand the reasons behind professionalization, the ways it is carried out, and the intervening conditions and outcomes. Scholars have proposed that specific internal conditions or stages, such as the threshold stage, influence decisions to initiate professionalization (Zahra and Filatotchev, 2004). Scholars have also attempted to understand how changes to governance mechanisms (Gedajlovic *et al.*, 2004), organizational structure, and systems (Eddleston *et al.*, 2019) or sociocultural aspects (Hall and Nordqvist, 2008) influence the likelihood of successful professionalization. Furthermore, scholars have investigated how potential intervening conditions—such as individual characteristics (Hsu *et al.*, 2013) or organizational values (Chau and Wong, 2021)—influence professionalization. Finally, scholars have shown how professionalization contributes to organizational growth (McKelvie *et al.*, 2021), internationalization (Costa *et al.*, 2021), improved performance (Pauli, 2020), and innovation (Duran *et al.*, 2016; Chaochotechuang *et al.*, 2020).

This conspicuous body of literature has called for syntheses to organize the current works and help direct future investigations toward more cohesive and coherent scholarly developments. This is because the current fragmentation has the potential to generate

inaccurate theoretical claims and incorrect empirical developments as well as hinder the capacity of scholarly work to provide fruitful recommendations for managerial practice.

Early syntheses focused on how professionalization is discussed in sports management research (Dowling *et al.*, 2014), highlighting broad classifications of professionalization (i.e., organizational, systemic, occupational) and providing directions for future research. The more recent syntheses have mostly been conducted in the context of family business, focusing on specific aspects such as entrepreneurial development (Kumar and Dubey, 2022), organizational structure (Ahmad Tipu, 2022), restructuring (King *et al.*, 2022), and family succession (Ge and Campopiano, 2021).

Surprisingly, although knowledge has long been considered one of the most significant resources in organizations (Spender, 1996) and SMEs represent one of the most common forms of organizing (Chaochotechuang *et al.*, 2020) playing a key role in global economies (Zahra and Filatotchev, 2004) a synthesis on the key role that knowledge plays in professionalization attempts in SMEs has not been produced. To grow and professionalize their operations, SMEs need to properly manage their owned knowledge (Zahra and Filatotchev, 2004; Senivongse *et al.*, 2022), including tacit or explicit knowledge (Nonaka, 1994; Nonaka and Takeuchi, 1995; Tsoukas, 2009; Hadjimichael and Tsoukas, 2019) possessed by single individuals (Blackler, 1995) or created collectively in organizations (Cook and Brown, 1999; Tsoukas, 1996) through interactions and practices (Lave and Wenger, 1991). Proper management of individual and collective knowledge in organizations has been linked to successful organizational adaptation (Querbach *et al.*, 2021; Oh and Kim, 2022) and growth (Zahra and Filatotchev, 2004) and has been considered a key resource while transitioning to more established forms of organizing (Mariano and Casey, 2016).

Therefore, a synthesis of how knowledge contributes to the professionalization of SMEs is timely and relevant to further theoretical developments as well as managerial practice.

Accordingly, this paper systematically reviews the management and organization studies literature to provide a synthesis of existing contributions. Furthermore, it aims to help direct future research on the contributing role of knowledge in the professionalization of SMEs. The significance of such a systematic literature review is threefold. First, it aims to synthesize the current scholarly works to provide an in-depth understanding of the causal conditions, modes, intervening conditions, and consequences of the professionalization of SMEs from a knowledge-based perspective. This systematic literature review helps integrate scholarly insights and provides a more holistic view of the contributing role of knowledge to the professionalization of SMEs. Second, it provides a research agenda that aims to direct scholars interested in extending their current understanding with further theoretical or empirical investigations. Third, it aims to support managerial practice by providing a clear understanding of organizational variables and dynamics that may facilitate or hinder the professionalization of SMEs.

The systematic literature review presented in this paper is guided by three overarching questions that were meant to direct attention without being too restrictive: 1) How is professionalization of SMEs discussed in the management and organization studies literature? 2) What is the role of knowledge while SMEs attempt professionalization? and 3) What are the research areas that require future investigation?

This paper is organized as follows. First, it discusses the methodology employed to systematically review the literature. Then it presents and discusses the findings. Next, it provides a list of future research directions. Lastly, it reports the conclusions, implications, and limitations.

Methodology

This article employs a systematic literature review to identify, select, and analyze published works related to the professionalization of organizational knowledge in the context of SMEs. This systematic literature review follows the recommendations of Tranfield *et al.* (2003) and Webster and Watson (2002) and includes three major stages of planning, conducting, and reporting (see Figure 1).

Planning

The first stage of the systematic literature review involved the identification of the research needs, questions, and protocol development. The research needs emerged during a larger inductive research investigation of knowledge dynamics in the context of an SME. While extensively reviewing the management and organization studies literature to make sense of the emerging research findings, although the field seemed mature for a systematic literature review, it was clear that the current literature lacked organization and integration, and it did not appear to be sufficiently synthesized. Therefore, three research questions were elaborated, and a systematic literature review protocol was developed.

Conducting

The second stage of the systematic literature review involved two steps; first, articles were identified and retrieved and second, the articles were coded.

Identification and retrieval of articles

The identification and retrieval of articles included the use of multiple research databases available at the affiliated institution, including SCOPUS, ABI/INFORM Global, ScienceDirect, and Google Scholar. Keywords such as ‘professionalization’ or ‘professionalisation’ or ‘professionalism’ or ‘professional’ in combination with ‘SME’ or ‘small and medium enterprise’ or ‘small and medium-sized enterprise’ were searched in the article titles, abstracts, and keywords. As the identification and retrieval of articles

progressed, additional searches were conducted to include ‘family business’ or ‘family firms’ in the original combination of keywords. This was done to ensure the comprehensiveness of the included articles but was not meant to change or re-address the overall aims and scope of the systematic literature review.

After this preliminary list of articles was identified (n=542), inclusion and exclusion criteria were applied to finalize the list. To be included in the preliminary list, articles had to be available in full-text format, peer-reviewed, and the publication language had to be English. To be excluded from the preliminary list, articles had to be not available in full-text format (n=1). Out of scope, duplicate articles, editorials, comments, conference papers, books, book chapters, and book reviews were also excluded (n=505). The reasons for the decision to include only peer-reviewed articles in the systematic literature review were twofold. First, peer-reviewed articles are widely recognized, scientifically validated sources of knowledge (Podsakoff *et al.* 2005). Second, there is consensus on the use of peer-reviewed articles in systematic literature reviews (Senivongse *et al.*, 2017; Mariano and Walter, 2015) or scientometric studies (Serenko and Dumay, 2015a, 2015b).

To minimize sample selection bias (Ferrari, 2015) while increasing the comprehensiveness of the research findings, manually retrieved articles were also added to the preliminary articles list (n=41). These manually retrieved articles were identified through a scrutiny of reference lists and their citation frequency in the articles reviewed. The final list included 78 articles and 48 journals, with the first article published in 1980 (Charan *et al.*, 1980) and the most recent articles published in 2022 (e.g., Barroso-Castro *et al.*, 2022; García-Lopera *et al.*, 2022).

Coding of articles

The coding process involved two related and complementary steps.

First, to organize the final list of articles, the articles were downloaded and entered into a folder created using the Mendeley reference manager software. Furthermore, a spreadsheet was created. The spreadsheet reported author(s) names, article title, year of publication, journal title, article type, methodology, level of analysis, key findings, future research directions, specification of context type, specification of country where data were collected, specification of analyzed industry/industries, abstract, source link, citation count, and the keywords list.

Second, an organizing framework for coding was elaborated and a codebook was created. The organizing framework had to be sufficiently articulated to ensure accuracy and comprehensiveness while encompassing the variety of included articles. Further, it had to facilitate the integration of conceptual and empirical studies while ensuring parsimony and generality (Langley, 1999; Suddaby, 2010). It also had to be suitable to capture the dynamic dimension of professionalization that implied a degree of organizational change. To elaborate the organizing framework, the seminal and widely recognized contributions on individual and organizational knowledge by Polanyi (1958, 1966), Nonaka (1994), Nonaka and Takeuchi, (1995), Spender (1996), Blackler (1995), Tsoukas (1996), and Cook and Brown (1999) were considered. Additionally, more recently published scholarly work on organizational knowledge was reviewed (Hadjimichael and Tsoukas, 2019). To finalize the organizing framework, alternative frameworks were tested on a sample of articles. In accordance with similar systematic reviews (Su and Daspit, 2021; Bruneel and De Cock, 2016; King *et al.*, 2022; Armenakis and Bedeian, 1999), the final chosen framework included causal conditions, modes, intervening conditions, and consequences. Furthermore, since the present systematic literature review focused on a knowledge-based perspective, specific knowledge-related attributes were included, such as individual and collective knowledge (Hecker, 2012), distinctions between tacit/explicit knowledge (Nonaka, 1994; Nonaka and Takeuchi, 1995),

and inclusion of knowing which is knowledge in practice (Cook and Brown, 1999; Lave and Wenger, 1991). The final framework is shown at the bottom right-side of Figure 1. To ensure consistency of code application, a codebook including definitions of codes and related examples was created (see Table I). The codebook helped the deductive coding of articles to synthesize research findings, which has proven to be particularly beneficial in evaluation studies such as literature reviews (Hsieh and Shannon, 2005).

Reporting

The third step involved the reporting of findings using author-centric and concept-centric tables (Salipante *et al.*, 1982; Webster and Watson, 2002), descriptive statistics, and visual representations elaborated with nVivo or Microsoft Office software packages (for example, Figures 3 and 4). A narrative explaining the findings was also produced.

Insert Figure 1 and Table I here

Findings

The systematic literature review findings are discussed in the following sections, which aim to answer the first two research questions: 1) How is professionalization of SMEs discussed in the management and organization studies literature? and 2) What is the role of knowledge while SMEs attempt professionalization?

The first section presents the cumulative frequency of publications (1980–2022). The second section provides descriptive statistics. The third section provides a description of the themes, grouped in causal conditions, modes, intervening conditions, and consequences. The fourth section presents the organizing framework developed from the reviewed literature.

Cumulative frequency of publications (1980–2022)

Figure 2 shows the cumulative frequency of publications. The oldest article was published in 1980 (Charan *et al.*, 1980) and proposes a set of guidelines to transition to professional organizations. The most recent articles (n=6) were published in 2022 and focus

on board of directors (BoDs) composition; the mediating role of risk-taking orientation and technological innovation; a discussion of professionalization as a broader multidimensional form of organizational transformation; and investigation strategies, learning processes, and the role of human and social capital in SMEs. The highest numbers of publications were recorded in 2019 (n=8) and in 2016, 2021, and 2022 (n=6).

Methodology, level of analysis, keyword analysis, country frequency, and industry frequency

The majority of articles were empirical contributions (n=69), mostly quantitative studies focusing on the organizational level of analysis (n=33). The second most conspicuous group of articles included empirical qualitative studies at the organizational level of analysis (n=21). Conceptual articles (n=9) were sparse. A few articles focused on the individual (n=8), group (n=1), or interorganizational level of analysis (n=2) (see Table II).

‘SMEs’, ‘professionalization’, and ‘family’ were the top three used keywords per the keyword analysis conducted with nVivo software and as shown in the word cloud figure (see Figure 3).

For empirical articles, the frequency of conducted studies by country was as follows: the USA (n=11); Spain (n=9); the UK (n=5), Belgium, Taiwan, and Hong Kong (n=4); India, Italy, Poland and France (n=3); Germany, the Netherlands, Portugal, Turkey, Uzbekistan, Brazil and Canada (n=2); and Austria, Bangladesh, Belarus, Bulgaria, Denmark, Japan, Kazakhstan, Lithuania, Mexico, Romania, Russia, Serbia, Singapore, Sweden, Thailand, Tunisia, the Ukraine (n=1) (see Figure 4). In three cases, samples were represented by multiple countries. In 46 articles, the sample included multiple industries. Eight articles focused on the manufacturing industry; two articles focused on the beverage industry, specifically the wine industry; and two articles focused on the hospitality industry. The remaining samples included the following industries: engineering, high-tech, home

entertainment, jewelry, metallurgy, generic non-financial, generic financial, pharmaceutical, social welfare, software, and steel fabrication.

Insert Figures 2, 3, and 4 and Table II about here

In addition to the elaboration of descriptive statistics, a deductive coding of articles was conducted. As per the developed codebook, coding helped categorize the research themes into causal conditions, modes, intervening conditions, and consequences of the professionalization of SMEs, with one additional attribute that emerged inductively from the analysis of articles, which was labeled “multidimensionality” (see Table III).

Insert Table III about here

Professionalization of organizational knowledge: Causal conditions

Causal conditions relate to internal or external reasons an organization initiates professionalization. The analysis of articles showed that two groups of factors contributed to initiate professionalization: governance and structure-related factors.

Governance. The first group of factors relates to the governance of the organization and includes a change recognition need or refers to organizational succession. Previous studies (Charan *et al.*, 1980; Hofer and Charan, 1984) highlighted that if entrepreneurs decide to pursue professionalization, they must be open to and want the change (Camfield and Franco, 2019a) to the extent that they are willing to modify their own behaviors. Therefore, ability and willingness to professionalize represent necessary conditions for professionalization success (Hiebl and Mayrleitner, 2019). Moreover, scholars (Barringer *et al.*, 2005) have found that commitment and motivation are key factors of rapid organizational growth. To determine whether a change is necessary, Charan *et al.* (1980) suggested assessing the current organizational conditions, including strategy, structure, and decision-

making processes. In doing so, entrepreneurs are proposed to “lay the foundation for a successful transition” (Charan *et al.*, 1980, p. 5). Intergenerational succession, where successors promote transitions to more mature forms of organizing, has also been proposed to initiate professionalization, (Camisón *et al.*, 2021; Camfield and Franco, 2019b; Costa *et al.*, 2021; Chittoor and Das, 2007).

Structure. The second group of factors relates to a transition stage where organizational structures and systems can no longer support growth opportunities and thus need to be restructured. Kaehr Serra and Thiel (2019), Zahra and Filatotchev (2004), and Hellmann and Puri (2002) refer to organizations reaching this transition stage as “threshold organizations.” Hellmann and Puri (2002) propose that, during this stage, institutional investors may exercise pressure to professionalize the organization. To achieve strategic flexibility, Zahra and Filatotchev (2004) indicate learning as a key practice to acquire new and relevant knowledge to move from a threshold stage to more mature forms of organizing. Additionally, Tam and Gray (2016) propose that learning differs depending on the organizational life cycle.

Professionalization of organizational knowledge: Modes

The following sections discuss the modes connected to SME professionalization. Modes are grouped according to the codebook and include individual tacit and explicit knowledge, collective tacit and explicit knowledge, and knowing.

Individual tacit knowledge

Individual tacit knowledge relates to individual knowledge embodied in an individual derived from personal experience, intuition, cognitive skills, know-how, or a “feel” for the proper use of a tool or mechanism (Cook and Brown, 1999). Examples include individual know-how, individual expertise, individual prior knowledge, and the mental capacity to perform work or solve problems. The analysis of articles revealed the crucial importance of

individual tacit knowledge during SME professionalization. From an individual tacit knowledge perspective, three major ways to professionalize SMEs have been proposed: (1) the inclusion of an independent BoDs who bring their own tacit knowledge to the organization, (2) the hiring of professional managers who possess their own tacit knowledge and experience to manage the professionalization transition stage as well as the restructured organization, and (3) the acquisition of new knowledge by the head(s) of the organization.

Independent BoDs. Barroso-Castro *et al.* (2022) found that the inclusion of an independent BoDs facilitates the introduction of new skills, abilities, experience, and relational knowledge, thereby substituting for the organization founders' lack of experience (Zahra and Filatotchev, 2004) and contributing to professionalization and innovation (Barroso-Castro *et al.*, 2022). BoDs are thought to represent an "impressive mechanism" (Daily and Dollinger, 1992, p. 31) for accessing information, knowledge, and resources and for mitigating any tensions that may emerge after a CEO transition (van Helvert-Beugels *et al.*, 2020). Contrasting opinions still exist where some scholars (e.g., Pearce and Zahra, 1992) propose that organizational or environmental complexity pressure the BoDs to be more professional, while others (e.g., Yildirim-Öktem and Üsdiken, 2010) suggest that the professionalization of the BoDs depends on institutional pressure and the presence of joint venture partners.

Professional managers. Similarly, the hiring of professional managers has been proposed to: (1) revitalize organizational resources (Gedajlovic *et al.*, 2004; Zahra and Filatotchev, 2004; Zahra *et al.*, 2009) with refined managerial skills and knowledge (Lin and Hu, 2007), (2) aid professionalization attempts (Costa *et al.*, 2021; Chittoor and Das, 2007; D'Angelo *et al.*, 2016; Dekker *et al.*, 2013; Dekker *et al.*, 2015; Dyer, 1989; Hellmann and Puri, 2002; Polat, 2020; Tsui-Auch, 2004), and (3) promote organizational innovation (Diéguez-Soto *et al.*, 2016), especially if professional managers are graduates of elite

institutions due to their specialized technical knowledge and strong social capital connections (Chang and Shim, 2015). Possessed knowledge, professional ethics, values, norms, and continuous professional development have been proposed to define a professional manager (Polat, 2020). However, Hall and Nordqvist (2008) have put forward that formal qualifications and competences might need to be integrated with cultural competences—related to organizational goals, meanings, values, and norms—to achieve higher levels of organizational effectiveness.

Head(s) of the organization. Finally, the acquisition of new, professional knowledge by organization heads (Camisón *et al.*, 2021; see also Ottewill *et al.*, 2000) or the members of the family business involved (Dyer, 1989) has been proposed to: (1) generate more conducive organizational environments for the development of capabilities and entrepreneurial outlooks (Camisón *et al.*, 2021), (2) contribute to the integration of professional knowledge and values (Dyer, 1989), and (3) assist in the reduction of risk and change aversion (Camisón *et al.*, 2021). Furthermore, a group of studies (Camfield and Franco, 2019a, 2019b) suggested that proper training of family business members or their effective involvement in the business operations has the potential to help them acquire new skills and improve their own tacit knowledge to transition to a professional organization or to promote internationalization (Loué, 2018; Fernández-Ortiz and Lombardo, 2009). Necessary conditions include the willingness and ability to gain the new tacit knowledge (Dyer, 1989).

Individual explicit knowledge

Individual explicit knowledge relates to concepts expressed explicitly by an individual and pertains to what individuals already know or can express explicitly (Cook and Brown, 1999). Examples of individual explicit knowledge include personal notes, summaries, maps, schemes, personal guidelines, and templates. The analysis of selected articles did not uncover studies focusing on the role of individual explicit knowledge during professionalization

attempts of SMEs. This is an underdeveloped research area and a potential venue for future research directions.

Collective tacit knowledge

Collective tacit knowledge relates to a collectively produced body of knowledge embedded in a group of individuals that grows over time (Tsoukas and Vladimirou, 2001). Examples include collective understandings of appropriateness, definitions, anecdotes, phrases, metaphors, and stories relating to how to work; descriptions of previous successes or failures; and shared understandings (e.g., what it means to produce a “sloppy report”). The analysis of articles revealed it makes two potential contributions to the professionalization of SMEs, namely contributing to (1) the professionalization of organizational functions and (2) the professionalization of the organizational community.

Introduction of function-related knowledge. At the function level, the introduction of collective tacit knowledge has been discussed in relation to specific functions such as finance (Camfield and Franco, 2019a) or human resources (Barringer *et al.*, 2005; Camfield and Franco, 2019a; Dekker *et al.*, 2015; Hellmann and Puri, 2002; Madison *et al.*, 2018; Yedder, 2018). A professionalized human resources function has been related to proper recruitment, selection, reward (Chua *et al.*, 2009; Songini and Gnan, 2009; Hellmann and Puri, 2002), and retention mechanisms to manage key employees (Barringer *et al.*, 2005; Hellmann and Puri, 2002) who are vital resources of professionalized organizations. The introduced collective tacit knowledge at the level of the human resources function has been proposed to increase promotion transparency (Costa *et al.*, 2021), reduce improper performance evaluation distortions (Chua *et al.*, 2009), and contribute to organizational performance (Guerrero *et al.*, 2022). Furthermore, Hellmann and Puri (2002) suggest that a professionalized human resources function could help overcome the challenges of attracting highly talented individuals. However, contrasting opinions remain. Some scholars (e.g., Michiels *et al.*,

2017; García Pérez de Lema and Duréndez, 2007) propose that the professionalization of such functions helps reduce agency costs related to parental altruism or nepotism, thus contributing to higher dividends. Others (e.g., Chua *et al.*, 2009) argue that the professionalization of such functions may be more problematic and costly compared to previous collective tacit knowledge configurations relying on informal and cultural mechanisms (de Kok *et al.*, 2006).

Development of community-related knowledge. At the community level, the development of collective tacit knowledge has been discussed in relation to the use of shared stories (Kammerlander *et al.*, 2015), intra-firm consultations (Charan *et al.*, 1980), knowledge sharing practices (Zahra and Filatotchev, 2004; Zahra *et al.*, 2007), and effective communication (Polat, 2020), which are proposed to help build receptiveness (Fletcher, 2002), consensus and commitment; ease conflict; and guide individuals (Polat, 2020).

Collective explicit knowledge

Collective explicit knowledge relates to a collectively produced body of knowledge embedded in artifacts and information technology repositories that emerges over time (Franco and Mariano, 2007) to guide collective activities. Examples include formalized structures and systems, organizational charts, rules, policies, standard operating procedures, templates, databases, centralized repositories, wikis, and intranets. The analysis of articles showed two major contributions of collective explicit knowledge to the professionalization of SMEs. The first contribution concerns the formalization of the organizational structures to clarify “who does what”, and the second relates to the formalization of the organizational systems to clarify “how to” accomplish work and tasks.

Formalized structures. Formalization of organizational structures has been implied to change the chain of command and introduce an organizational chart—an example of collective explicit knowledge—thereby exemplifying changes to reporting structures,

attributed formal power, formal control, and structured decision-making processes that could be modified due to delegation and authority decentralization. Scholars (Dekker *et al.*, 2013; Dekker *et al.*, 2015) have argued that changes to authority line and the introduction of decentralized structures increase organizational flexibility and make organizations more receptive to complex and over changing environmental shifts (Dekker *et al.*, 2013; Dekker *et al.*, 2015). Such formal changes to reporting (Songini and Gnan, 2009) and decision-making have been proposed to restructure the distribution of formal power and control and have been found to be especially relevant when transitioning from a family business to a professional organization (Dekker *et al.*, 2013; Dekker *et al.*, 2015; Lien and Li, 2014). Such a relevancy has been linked to the possibility to overcome some intrinsic characteristics of family businesses and their tendency to opt for social methods of control (Daily and Dollinger, 1992). Furthermore, the formalization of organizational structures has been associated with the production of clearer job descriptions with explicit specifications of job roles and responsibilities. Such explicit knowledge collectively made available to the organizational members has been thought to help avoid overlapping issues, prevent the emergence of broken links in the unity of command, and provide clarity as to “who does what.” Furthermore, such collective explicit knowledge has been proposed to clarify accountability, promote organizational values related to empowerment and meritocracy (Eddleston *et al.*, 2019), and increase collective trust (Camfield and Franco, 2019b; Dekker *et al.*, 2015; Chua *et al.*, 2009).

Formalized systems. Formalization of the organizational systems has been proposed to aid the production of a collective explicit body of knowledge embedded in rules, routines, policies, and standard operating procedures on “how to” accomplish work and tasks (Polat, 2020). Some scholars (Heredia-Calzado and Duréndez, 2019) have suggested it may include the adoption of an enterprise resource planning system or the introduction of formal planning

(Polat, 2020), which have been linked to increased competitive advantage. Others (Malo *et al.*, 2022) have pointed out the key role of organizational learning in the acquisition and retention of standards updates.

Knowing

Knowing relates to “how to act within a domain of action” (Tsoukas and Vladimirou, 2001, p. 978) and refers to concrete, relational, and dynamic human actions (Cook and Brown, 1999). While it uses tacit knowledge as a tool, it is not in and of itself tacit knowledge. Examples include riding a bike, following an industry-related recipe, and training and management practices. The analysis of articles showed that SMEs used several practices at the individual and organizational levels while attempting to professionalize their operations. At the individual and organizational levels, professionalization practices included strategizing and projecting professionalism and training and regulating, respectively.

Individual practices. At the individual level, scholars (Kaehr Serra and Thiel, 2019; Hung and Whittington, 2011) have proposed several strategizing practices that help professionalize SMEs. Since professionalization implies a degree of change, scholars (Kaehr Serra and Thiel, 2019) have proposed that CEOs could promote it through a change readiness activation, shared pathway creation, and founder legacy fairness that, taken together, would help them transition SMEs into more mature organizational forms. Similarly, scholars (Hung and Whittington, 2011) have proposed that institutional entrepreneurs could potentially strategize by framing (from justification to generalization), aggregating (from remediation to proactiveness), and networking (from import to export) and could help overcome constraints faced through the institutional entrepreneurs’ local legitimacy and international networks to create more effective professionalized organizations (Hung and Whittington, 2011). Reaching strategic consensus has also been considered key to organizational success (Veloso Saes *et al.*, 2022).

Projecting professionalism is said to be crucial to the professionalization of SMEs. Projecting professionalism implies an implementation of “appropriate’ work identities, conduct, and practices” (Gaglio, 2014, p.2). Some scholars (Liljegren, 2012) have suggested that professionalism is achieved through the development of regulations and controls embedded in organizational routines and rules that clarify what to do and how to do it (Liljegren, 2012). Others (Gaglio, 2014) have suggested that professionalism may require proper development of situated skills developed during daily activities and actions. Scholars have linked professionalism to positive influences on performance and innovation (Diéguez-Soto *et al.*, 2016), effective relationships with customers (Parry *et al.*, 2011), and socially responsible management (Aragon-Amonarriza and Iturrioz-Landarta, 2020). Attributes scholars (Cheng and Wong, 2015) associate with professionalism include passion, sensitivity, and open-mindedness to new trends; team-oriented attitude; competence and skills; emotional self-control; professional ethics; leadership by example; and perfectionism. Scholars have further proposed that professionalism implies the introduction of sound management practices and organizational standards connected to efficiency and profitability (Dyer, 1989). Some assert that professionalism helps overcome the challenges posed by inefficient decisions made because of altruistic behavior by SMEs family business members (García Pérez de Lema and Duréndez, 2007). Scholars (Udomkit *et al.*, 2020) have also suggested that professionalism contributes to building trust, competency, honesty, integrity, empathy and caring.

Organizational practices. At the organizational level, scholars (Eddleston *et al.*, 2019) have proposed that formal training helps establish discipline and supports organizational involvement. Furthermore, scholars have suggested that training represents a key element of employee professionalization (Dyer, 1989) and a competitive factor for organizations attempting professionalization (García Pérez de Lema and Duréndez, 2007), coupled with

transparency and trust (Costa *et al.*, 2021). Since training was proposed to positively influence the development of SMEs, Pauli (2020) investigated training practices in 100 SMEs and found it to be an underdeveloped practice. However, the results showed that those SMEs that executed training professionalization—a formal training that reflected best practices and professional knowledge—reported higher outcomes and better performance.

An additional practice is regulating operations through formal and frequent meetings and ongoing monitoring. First, regulating has been linked to the use of formal and frequent meetings at the levels of the governing board and the management team (Camfield and Franco, 2019b). Although contrasting results have been found on whether the use of frequent formal meetings has a positive influence on the overall performance (for a discussion see Dekker *et al.*, 2015), the activeness of the BoDs or management team has been proposed to be directly connected to the frequency of formally scheduled meetings. Second, regulating has been linked to the practice of constant (Hofer and Charan, 1984) and objective (Dekker *et al.*, 2015) monitoring of key indicators and managerial self-monitoring (Charan *et al.*, 1980) to facilitate and aid in the transition period to more mature forms of organizing.

Professionalization of organizational knowledge: Intervening conditions

Intervening conditions relate to those conditions that mediate the relationships between the causal conditions and the professionalization of SMEs. They may also mediate the relationship between the professionalization of SMEs and the consequences. Examples of intervening conditions include personal or organizational conditions that may positively or negatively influence professionalization attempts. They also include external conditions. The analysis of articles uncovered several intervening conditions at the individual, organizational, and external environment levels.

Personal conditions. Personal conditions include personal attributes, values, and restraints, as well as demographic characteristics such as age (Hsu *et al.*, 2013) or gender

(Songini and Gnan, 2009), education level, and international experience (Barringer *et al.*, 2005; Hsu *et al.*, 2013). Scholars (Hsu *et al.*, 2013) have proposed that younger, more educated, and more internationally experienced CEOs are more likely to positively influence professionalization attempts connected to internationalization aims; contrarily, older CEOs holding dual roles (Hsu *et al.*, 2013) have been suggested to have a detrimental influence on professionalization attempts connected to internationalization with negative consequences on organizational performance (Hsu *et al.*, 2013). Positive links between organizational growth and characteristics such as education, developed social networks, and previous industry and entrepreneurial experience have been found (Barringer *et al.*, 2005).

Furthermore, research has proposed that personal values such as solidarity, honesty (Camfield and Franco, 2019b), self-transcendence, self-enhancement, and openness to change (Camfield and Franco, 2019a) positively influence the professionalization of SMEs. On the other hand, personal restraints, such as conservatism linked to conformity, traditions, security (Camfield and Franco, 2019a), risk aversion (Costa *et al.*, 2021), emotional ties, and psychological problems have been linked to resistance to change (Charan *et al.*, 1980). Opportunism and lower commitment levels (Chua *et al.*, 2009) or bifurcation bias (Madison *et al.*, 2018) have also been proposed to have a negative influence on professionalization and overall performance. Some scholars (McKelvie *et al.*, 2021) have suggested that behavioral control—the likelihood of achieving planned aims—influences the likelihood of attempting professionalization and organizational growth and helps explain how SMEs perceive the potential opportunities or threats they might face and the corresponding decisions they may make. When the unwillingness to yield formal control prevails, other forms, such as the use of social methods of control, may prevail (Daily and Dollinger, 1992).

Organizational conditions. Organizational values include norms, goals, meanings (Hall and Nordqvist, 2008), and culture—where culture is proposed to relate to shared

professional values, mutual respect, trust, cooperation, and effective communication (Polat, 2020; see also Costa *et al.*, 2021; Cherchem, 2017; Polat and Benligiray, 2022). Such organizational values are thought to be crucial while pursuing professionalization of SMEs. Furthermore, risk-taking and technological innovation orientations have been suggested to mediate the relationship between professionalization and performance, thus demonstrating that organizations with higher levels of risk-taking and technological innovation orientations tend to achieve higher levels of performance (García-Lopera *et al.*, 2022).

Organizational restraints have been proposed to include inertia (Chirico and Nordqvist, 2010), institutional pressure and family essence (Marett *et al.*, 2020; see also Tsui-Auch, 2004), tensions (van Helvert-Beugels *et al.*, 2020), and micropolitics (Chau and Wong, 2021), which may negatively influence the professionalization of SMEs.

External conditions. Finally, external conditions, such as industry or the level of home economy development (Child *et al.*, 2017); country-level conditions, such as the level of minority shareholder protection (Duran *et al.*, 2016); and the workforce education level (Duran *et al.*, 2016) have been proposed to influence the professionalization and internationalization of SMEs.

Professionalization of organizational knowledge: Consequences

Consequences relate to the outcomes linked to the professionalization of SMEs. Examples of consequences include internal outcomes (e.g., increased or decreased organizational performance). The analysis of articles indicated four major consequences of professionalization: organizational performance, growth, internationalization, and innovation.

Research has linked professionalization to increased levels of performance, owing to the higher adaptability to environmental changes (García-Lopera *et al.*, 2022). Some scholars (Chang and Shim, 2015; Lien and Li, 2014) have suggested that professional management influences performance due to superior management talent; others (Dekker *et al.*, 2015), have

argued that an increase in externally-hired professional management affects performance only in the presence of sufficient authority decentralization and average or low formal financial control systems. Similarly, scholars (Lin and Hu, 2007) have suggested paring the option between professional or family governance with shareholders' weaker or higher controls positive influences organizational performance. Others have proposed a link between the professionalization of organizational workforce through training and an increase in organizational performance (Pauli, 2020; Polat and Benligiray, 2022). In family firms, scholars (Razzak *et al.*, 2021) have suggested that professionalization strengthens the relationships between family commitment and organizational performance.

Furthermore, research has proposed that professionalization assists organizational growth (Barringer *et al.*, 2005; Bruque and Moyano, 2007), suggesting that governance, attributes, and business or human resource management practices typical of professionalized organizations are key characteristics of rapid-growth firms (Barringer *et al.*, 2005).

Additionally, research has proposed a link between professionalization and internationalization (Eddleston *et al.*, 2019; Foscht *et al.*, 2006), suggesting that professionalized export departments are more likely to influence internationalization outcomes (Costa *et al.*, 2021) or that a synergistic combination of externally-hired professional managers and external ownership structures influences the internationalization of SMEs (D'Angelo *et al.*, 2016).

Finally, research has shown that professionalized organizations reach higher levels of organizational innovation (Maldonado-Guzmán *et al.*, 2019), implying that the professionalization of governance with the hiring of an external BoDs (Barroso-Castro *et al.*, 2022) or professional managers (Diéguez-Soto *et al.*, 2016) positively influences the product, process, and management innovation and facilitates persistent organizational innovation (Diéguez-Soto *et al.*, 2016). Scholars (Duran *et al.*, 2016) have suggested that organizations

with professional governance focus on creativity and social and human capital to remain innovative, whereas those with family governance should focus on incentives to foster innovation. Some scholars (García-Lopera *et al.*, 2022) have proposed that professionalization improves organizational innovation since innovation relies on an organization's collective knowledge.

Professionalization of organizational knowledge: Multidimensionality

An additional attribute emerged inductively from the analysis of articles. It relates to the fact that professionalization has been considered complex (Costa *et al.*, 2021; Chau and Wong, 2021; Polat, 2020; Howort *et al.*, 2016), multidimensional (Dekker *et al.*, 2013; Dekker *et al.*, 2015; Steward and Hitt, 2012; Polat and Benligiray, 2022), not permanently acquired (Hall and Nordqvist, 2008), context-specific (Chau and Wong, 2021), and processual (Hall and Nordqvist, 2008). Scholars have proposed an alternative view to the traditional view of professionalization linked to the introduction of professional governance, arguing that such an introduction is a static and simplistic view of professionalization that discounts the complexity of the phenomenon. They have argued that being successful at professionalization does not ensure that the achieved results are permanently acquired, since changing circumstances may influence professionalization results (Hall and Nordqvist, 2008) and spark a revival of previously-known management modes (Chau and Wong, 2021). Additionally, scholars have highlighted the concurrence of multiple dimensions of professionalization that do not exclusively relate to professional governance, proposing that they could provide greater explanations of organizational internal dynamics and relationships (Costa *et al.*, 2021) and potentially result in a better understanding of the influence on organizational performance (Dekker *et al.*, 2013; Dekker *et al.*, 2015). Some scholars (Howort *et al.*, 2016) have proposed that professionalization is achieved in waves influenced by changes in firm ownership and management, suggesting that organizations should focus

on operations when stewardship relationships predominate, and on agency control mechanisms when agency costs prevail.

Professionalization of SMEs from a knowledge-based perspective: An organizing framework

Figure 5 depicts the organizing framework developed from the analysis of articles. It includes causal conditions grouped related to governance (i.e., change recognition and succession) and causal conditions related to structure (i.e., threshold stage). It proposes that four knowledge-based modes influence professionalization of SMEs: individual tacit knowledge, collective tacit knowledge, collective explicit knowledge, and knowing. Furthermore, it proposes several intervening conditions, namely personal, organizational, and external conditions. Finally, it proposes four potential consequences of the professionalization of SMEs: performance, growth, internationalization, and innovation. A feedback loop is included to show that the professionalization of SMEs is complex, multidimensional, not once for all acquired, context-specific, and processual.

Insert Figure 5 about here

Future research directions

This section draws on current research gaps and provides recommendations for future research to answer the third research question: What are the research areas that require future investigation?

It proposes four broad research areas related to the professionalization of SMEs to be investigated from a knowledge-based perspective. Furthermore, it suggests possible propositions and research questions and provides additional insights related to potential methodological approaches to employ in future studies (see Table IV).

Research direction 1: Investigate the role of individual explicit knowledge during the professionalization of SMEs

The first research direction relates to the contribution of individual explicit knowledge to the professionalization of SMEs. The analysis of articles did not show specific studies related to how individuals produce or use their own explicit knowledge during professionalization attempts in SMEs. Thus, this represents an underdeveloped research area and a potential venue for future studies. This research area may be especially relevant to those scholars interested in how artifacts, objects, or boundary objects (Mariano and Awazu, 2017; Hawkins *et al.*, 2017; Monteiro and Nicolini, 2015); aid in strategic postures, processes, and practices, including professionalization; or help determine how such artifacts, objects, or boundary objects facilitate professionalism among individuals working in SMEs.

Potential research questions could include: How does individual explicit knowledge (e.g., personal notes, summaries, maps, schemes, personal guidelines, and templates) influence the professionalization of SMEs? Who is more likely to contribute to the production and use of such individual explicit knowledge during the professionalization of SMEs? How can this individual explicit knowledge be converted into individual or collective tacit knowledge during the professionalization of SMEs? What facilitates or inhibits this conversion process?

From a methodological standpoint, qualitative studies using personal diaries, observations, semi-structured interviews, and audio-visual material and longitudinal studies are recommended to capture the production and use of such knowledge during professionalization attempts in SMEs.

In synthesis, the following is proposed:

PI. Individual explicit knowledge, including its knowledge production and conversion, is likely to influence how SMEs attempt professionalization.

Research direction 2: Investigate the role of attention management during the professionalization of SMEs

A second research direction regards the role of attention management (Davenport and Völpe, 2001; Ocasio, 2011; Nicolini and Korica, 2021) during the professionalization of SMEs. Founders, entrepreneurs, or family members attempting professionalization of their SMEs are likely to face a turbulent transition period where multiple conflicting challenges may surface. During such unstable periods, organizational structures will need to be revised and organizational systems will need to be formalized. New opportunities requiring the attraction and hiring of qualified employees may also surface. During these times, working on the business (strategic direction) may conflict with working in the business (management and execution) (Gerber, 2021) and different knowledge types may be required. Therefore, proper management may help ease and, at times, resolve potential conflicts or challenges that may have surfaced by employing appropriate knowledge when needed. This will help clarify the competing demands that leaders must contend with (Marett *et al.*, 2020) and may provide a means to understand how best to manage tensions (van Helvert-Beugels *et al.*, 2020) as well as the appropriate knowledge required at different times. It may also provide a means to better understand those characteristics, capabilities, and experience of professional managers that may be more effective at minimizing emerged challenges and conflicts (Lien and Li, 2014).

Scholars who would like to advance theory and managerial practice could attempt to answer the following proposed research questions: How do management teams manage their attention during the professionalization of SMEs? What competing demands that require managerial attention are likely to emerge during the professionalization of SMEs? How do managers differentiate between working on the business vs. working in the business during the professionalization of SMEs? What knowledge types could help assist the management of

attention during professionalization attempts of SMEs? What theoretical lens could best help the investigation of attention management during the professionalization of SMEs?

From a methodological standpoint, qualitative studies using observations, shadowing methods, semi-structured interviews, and audio-visual material, as well as longitudinal studies may offer fruitful ways to investigate such issues in the context of SMEs attempting professionalization.

In synthesis, the following is proposed:

P2. The management of attention, including competing demands and involved knowledge types, is likely to influence how SMEs attempt professionalization.

Research direction 3: Investigate the role of organizational mnemonics during the professionalization of SMEs

A third research direction relates to the role of organizational mnemonics in the professionalization of SMEs. As SMEs transition to more mature forms of organizing, organizational learning and forgetting processes may occur. Governing bodies, management teams, and the workforce will need to adapt as the organization matures. This adaptation process may require new knowledge to be learned (Querbach *et al.*, 2021; Oh and Kim, 2022) while old knowledge may have to be abandoned. Along the way, some knowledge may be lost and other knowledge would need to be safely codified and stored to be learned or relearned (Zhao *et al.*, 2013). Therefore, investigations related to such issues are relevant and worthwhile. Such investigations could also help clarify aspects related to cognitive change challenges (Kaehr Serra and Thiel, 2019), transactive memory systems (Huang and Chen, 2018), power relations (Hodgson, 2005), or change resistance (Hodgson, 2005) that favor the retainment of certain types of knowledge while encouraging the loss of others.

Potential research questions that may direct future investigations may include: What is the role of organizational mnemonics in the professionalization of SMEs? What is the role

of individual and organizational learning? What is the role of organizational knowledge loss? What is the role of organizational unlearning?

From a methodological standpoint, qualitative studies including grounded theory and case studies and inductive methods (e.g., individual semi-structured interviews, observations, focus groups, analyses of private and public documents) appear to be fruitful. Additionally, quantitative studies employing survey research with large sample sizes could aid in generalization attempts. Finally, the inclusion of multiple research settings and/ or mixed-methods studies appears appropriate.

In synthesis, the following is proposed:

P3. Organizational mnemonics, including organizational learning, unlearning and knowledge loss, are likely to influence how SMEs attempt professionalization.

Research direction 4: Investigate the professionalization of SMEs processually

A fourth research direction proposes studying the professionalization of SMEs processually (Langley, 1999; Langley *et al.*, 2013; Kouamé and Langley, 2018) by examining daily activities and practices that may shape how SMEs transition to more mature forms of organizing. The current empirical research has mostly relied on quantitative methodologies and in a few cases, has employed qualitative methodologies, mostly case studies.

Investigating professionalization from a process perspective could thus provide a richer understanding of the micro-level dynamics in situated contexts to help understand the complex internal circumstances—especially those related to inside-family firms—that still, as suggested by Chang and Shim (2015), need further attention. It may also provide a means to clarify the professionalization timing (Chittoor and Das, 2007) and temporality in practices and processes diffusion and adoption (Raffaelli and Glynn, 2014); the mechanisms aimed at mitigating tensions, conflicts (Tsui-Auch, 2004); and the challenges of professionalization (Chittoor and Das, 2007), including the use of shared stories (Kammerlander *et al.*, 2015),

cultural competences (Hall and Nordqvist, 2008), and reasons only certain organizations survive through generations (Chirico and Nordqvist, 2010).

Potential research questions may include: What are the processes involved in the professionalization of SMEs? How do these processes unfold over time during the professionalization of SMEs? What conditions favor or inhibit processes related to the professionalization of SMEs?

The investigation of such research questions will require the use of observation, shadowing, semi-structured interviews, archival data, and audio-visual material. Furthermore, longitudinal studies appear to be particularly fruitful to pursue such research aims.

In synthesis, the following is proposed:

P4. Organizational processes, their unfolding, and their facilitating or inhibiting conditions, are likely to influence how SMEs attempt professionalization.

Insert Table IV about here

Conclusions, implications, and limitations

Drawing on a knowledge-based perspective, this paper systematically reviewed the management and organizational studies literature on the professionalization of SMEs and contributed to theory and managerial practices in several ways.

Contribution to theory on SME-related knowledge

First, this paper intended to synthesize theoretical and empirical works on the professionalization of SMEs from a knowledge-based perspective. To achieve this aim, a systematic literature review of peer-reviewed articles published in scholarly journals was conducted. The systematic literature review covered 42 years (1980–2022) and included 78 articles in 48 journals. Causal condition, modes, intervening conditions, and consequences were identified and synthesized in an organizing framework (see Figure 5). This synthesis

offered insights related to the types of knowledge that SMEs need to capitalize on to successfully carry out professionalization attempts, including governance-related knowledge (Gedajlovic *et al.*, 2004), collectively developed knowledge, and tacit (Zahra and Filatotchev, 2004;) and explicit knowledge (Polat, 2020). It also relates to knowledge developed in practice at the individual (Kaehr Serra and Thiel, 2019) and organizational level (Eddleston *et al.*, 2019). Furthermore, this synthesis offered insights related to the personal (Hsu *et al.*, 2013), organizational (Hall and Nordqvist, 2008), and external (Child *et al.*, 2017) conditions that influence professionalization. SMEs that intend to pursue professionalization must direct their efforts toward a more refined understanding of the contributing role of knowledge, exercising efforts that can help acquire new knowledge or refine the individual and collective knowledge they already possess.

Second, this paper intended to provide directions to future research interested in further investigation into how SMEs pursue professionalization from a knowledge-based perspective. It aimed to help direct future investigations toward more cohesive and coherent scholarly developments to reduce current fragmentation that could potentially generate inaccurate theoretical claims and incorrect empirical developments as well as hinder the capacity of scholarly work to provide fruitful recommendations to managerial practice.

Further areas of investigation include examinations of the role of individual explicit knowledge, attention management, and organizational mnemonics during professionalization attempts of SMEs. Furthermore, this paper suggested studying professionalization from a process perspective. This paper may serve as a reference for scholars and managers interested in a more refined understanding of how SMEs pursue professionalization from a knowledge-based perspective.

Contribution to managerial and training practices

This paper contributed to managerial and training practices by proposing variables and clarifying dynamics that could facilitate or hinder professionalization. Further, it suggested managerial practices concerning how to direct attention during the professionalization of SMEs. Managers could use the organizing framework as a roadmap while transitioning to professional organizations and while restructuring knowledge functions, systems, and processes. Being aware of the potential constructs involved in professionalization attempts may help direct managerial efforts more effectively and efficiently, thus potentially generating higher levels of performance. Furthermore, this paper highlighted the crucial role of organizational practices (e.g., training and regulating) and offered managers a more refined understanding of ways to execute training professionalization, implement best practices, and develop professional knowledge (Pauli, 2020). Finally, this paper highlighted the importance of managers exercising the practice of constant (Hofer and Charan, 1984) and objective (Dekker *et al.*, 2015) monitoring of key indicators, including managerial self-monitoring (Charan *et al.*, 1980), which was proposed to facilitate and aid transition periods to more mature forms of organizing.

This paper has limitations related to the accessibility of articles due to journals' subscription restrictions. Although the systematic literature review protocol employed in this study made use of multiple databases and a manually retrieved additional step to minimize sample selection bias and increase accuracy and comprehensiveness of the research findings (Ferrari, 2015), the use of alternative databases for the identification and retrieval of articles could have produced a slightly different final list of articles. Finally, the use of software other than nVivo or Microsoft Office software packages could have produced different visual maps or alternative graphical depictions of the research findings.

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Figure 1. Systematic Literature Review Protocol (Source: Author's own work)

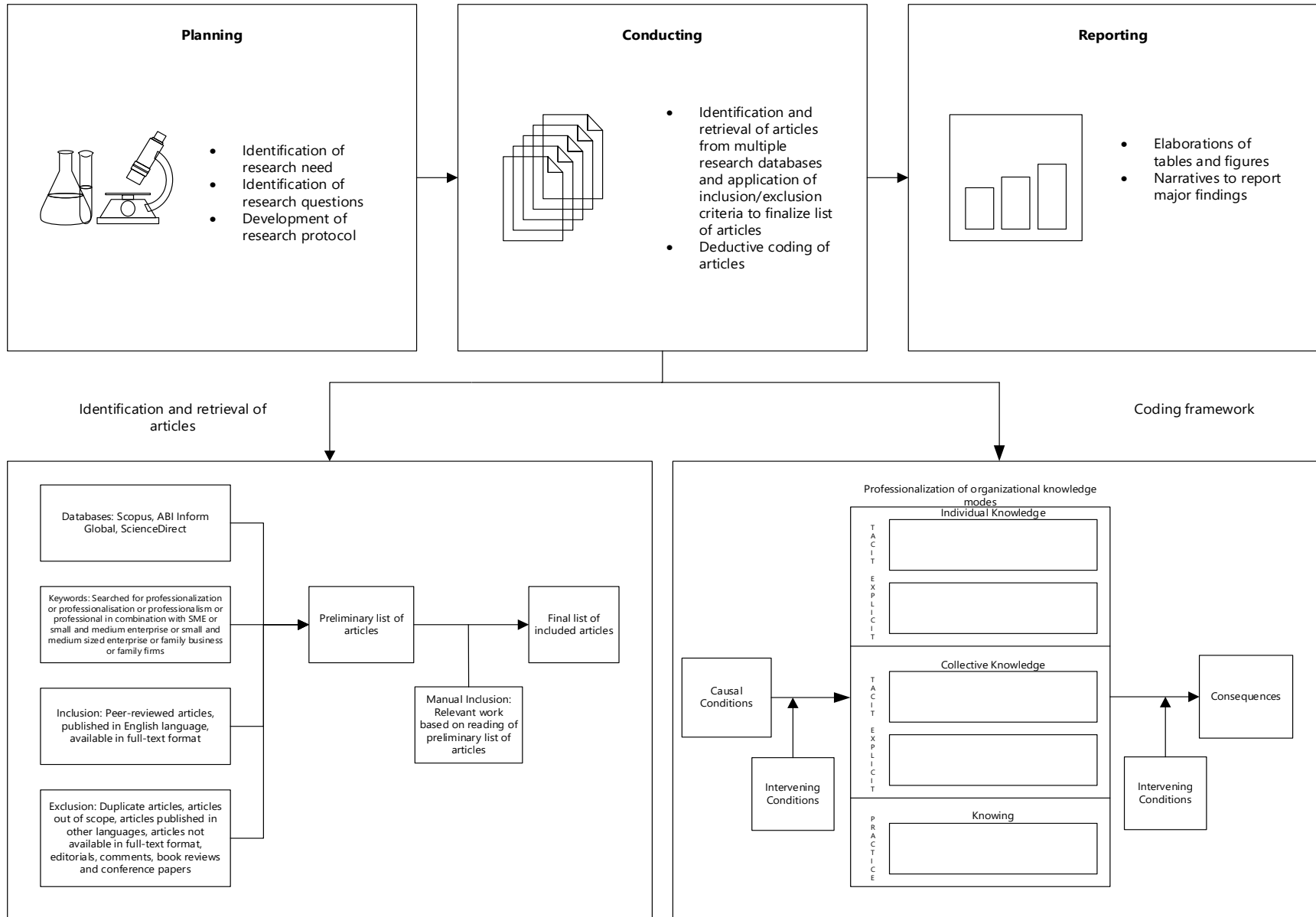


Figure 2. Cumulative Frequency of Publications (1980-2022) (Source: Author's own work)

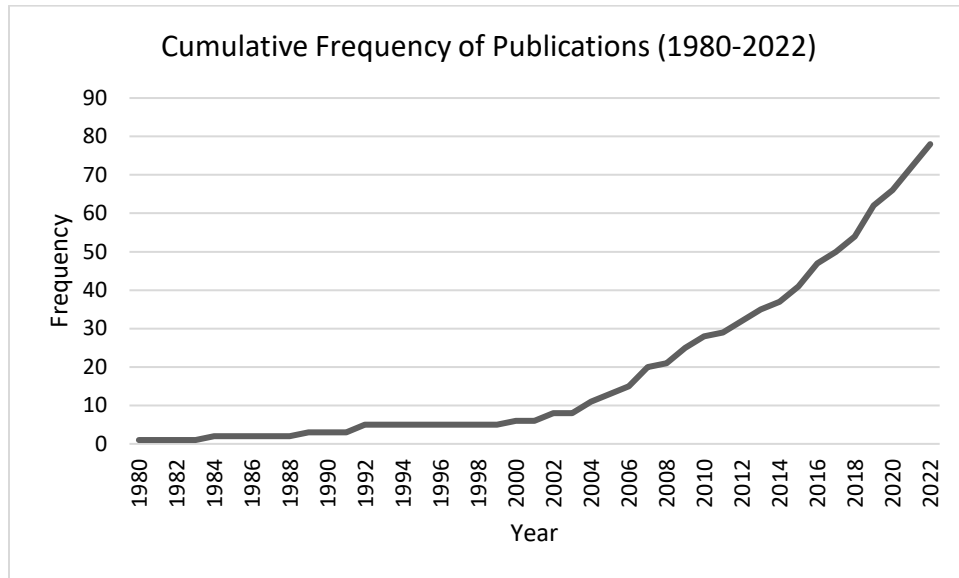


Figure 3. Word Cloud (Source: Author's own work)



Figure 4. Frequency of Conducted Studies by Country (Source: Author's own work)

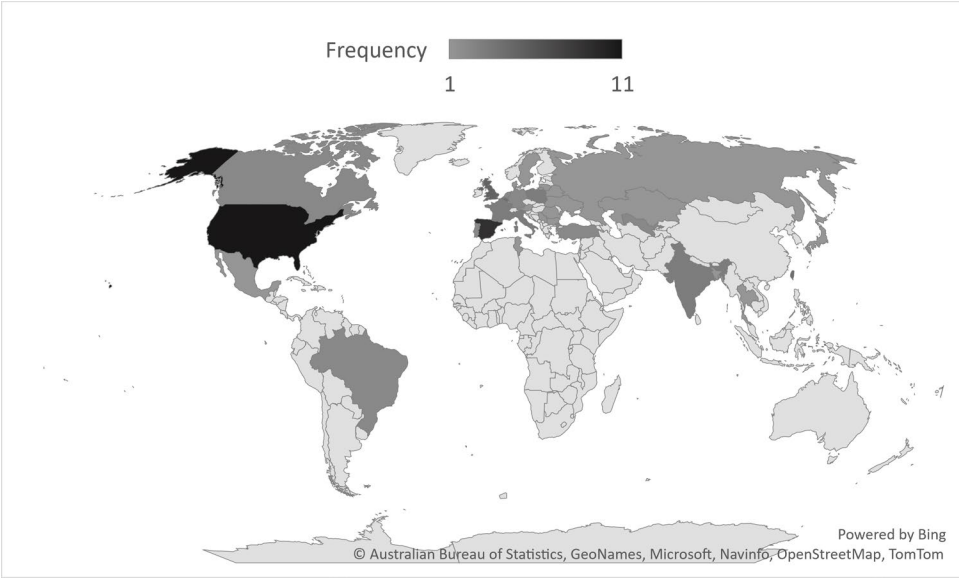


Figure 5. Organizing Framework (Source: Author's own work)

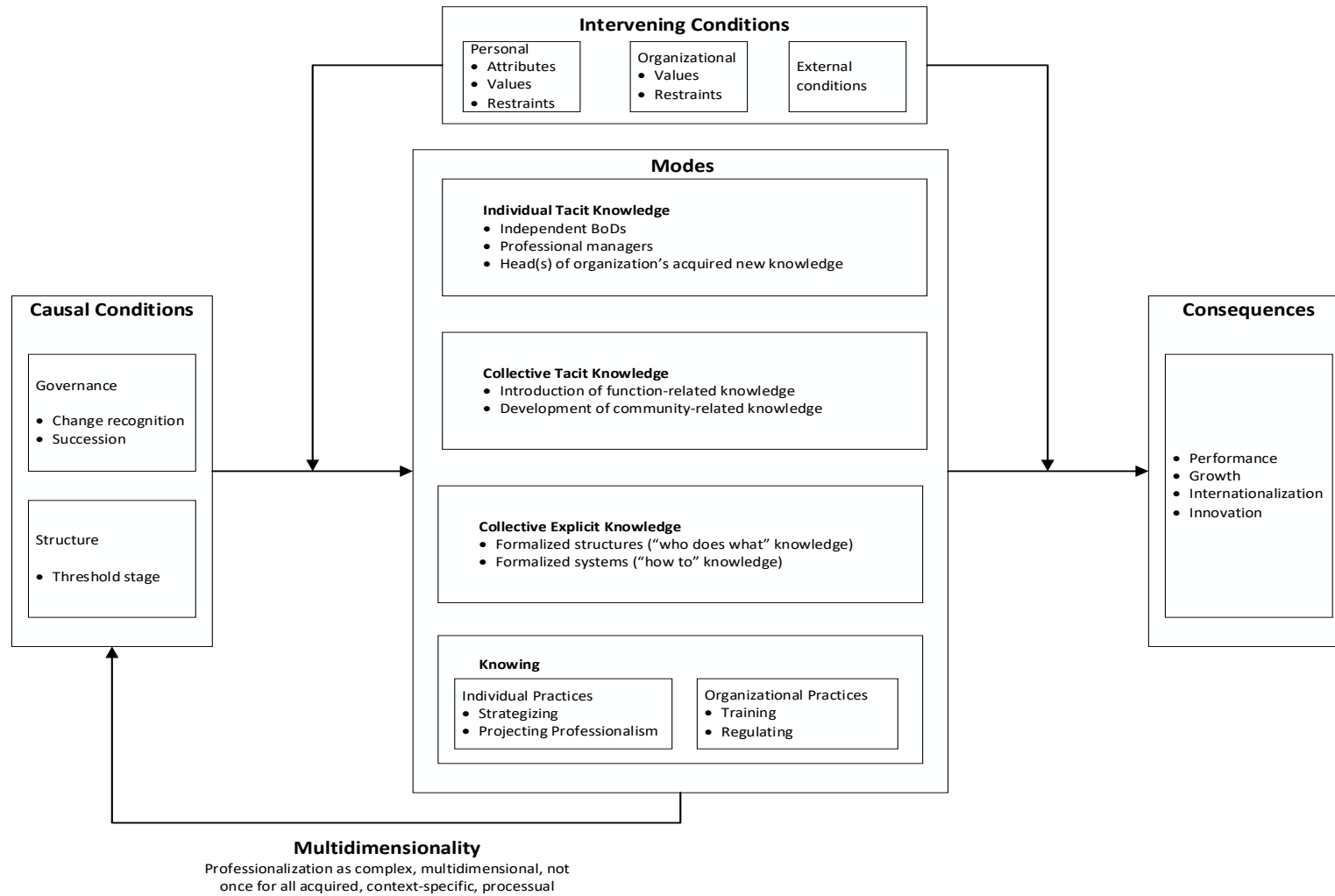


Table I. Codebook (Source: Author's own work)

Code	Description	Examples
Causal conditions	The conditions that initiate the professionalization of SMEs	Internal or external conditions related to the organization itself or to the general/specific external environments
Individual, tacit knowledge	Knowledge embodied in an individual derived from personal experience, intuition, cognitive skills, know-how, or “feel” for the proper use of a tool or mechanism (Cook and Brown, 1999)	Individual know-how, individual expertise, individual prior knowledge, mental capacity to perform work or solve problems
Individual, explicit knowledge	Concepts expressed explicitly by an individual and pertains what individuals already know or can express explicitly (Cook and Brown, 1999)	Personal notes, summaries, maps, schemes, personal guidelines, and templates developed by the individual
Collective, tacit knowledge	A collectively produced body of knowledge embedded in a group of individuals that grows over time (Tsoukas and Vladimirou, 2001)	Collective understanding of appropriateness, collective definitions, anecdotes, phrases, metaphors, stories relate to how to do work; descriptions of previous successes or failures, shared understanding, for instance what it means to produce a “sloppy report”
Collective, explicit knowledge	A collectively produced body of knowledge embedded in artifacts and information technology repositories that emerges over time (Franco and Mariano, 2007) to guide collective activities	Formalized structures and systems, organizational charts, rules, policies, standard operating procedures, templates, databases, centralized repositories, wikis, intranets
Knowing, practice	“How to act within a domain of action” (Tsoukas and Vladimirou, 2001, p. 978) and refers to concrete, relational, and dynamics human actions (Cook and Brown, 1999). While it uses tacit knowledge as a tool, it is not in and of itself tacit knowledge	Riding a bike, performing an industry-related recipe, training practices, management practices
Intervening conditions	The conditions that mediate the relationships between the causal conditions and the professionalization of SMEs and	Personal and organizational conditions (positively or negatively affecting the professionalization attempt) that

	between the professionalization of SMEs and its consequences	may include attributes, values, and restraints. External environmental conditions
Consequences	The outcomes linked to the professionalization of SMEs	Internal outcomes such as increased or decreased performance

Table II. Level of Analysis and Types of Contributions (Source: Author's own work)

	Types of Contributions				
Level of Analysis	Conceptual	Empirical			Total
		Quantitative	Qualitative	Mixed	
Individual	0	4	4	0	8 (10%)
Group	0	1	0	0	1 (1%)
Organizational	9	33	21	4	67 (86%)
Interorganizational	0	1	1	0	2 (3%)
Total	9 (12%)	39 (50%)	26 (33%)	4 (5%)	78 (100%)

Table III. Concept-centric Coding Map (Source: Author's own work)

Codes		Descriptions	Representative work
Causal conditions			
Governance	• Change recognition	Assessing present conditions, including strategy, structure, and decision-making processes to evaluate if change is necessarily	Charan <i>et al.</i> , 1980; Hofer and Charan, 1984; Hiebl and Mayrleitner, 2019; Barringer <i>et al.</i> , 2015
	• Succession	Succession proposed to initiate a transition to more professionalized organizations	Camisón <i>et al.</i> , 2021; Costa <i>et al.</i> , 2021; Chittoor and Das, 2007; Camfield and Franco, 2019a
Structure	• Threshold stage	Point of transition: Current managerial structures are inadequate to support new opportunities to grow the organization and need to be professionalized. Threshold stage may be associated with higher pressure from institutional investors to professionalize the organization	Kaehr Serra and Thiel, 2019; Daily and Dalton, 1992; Zahra and Filatotchev, 2004; Hellmann and Puri, 2002
Individual, tacit knowledge			
Independent BoDs		Inclusion of independent BoDs who bring their own tacit knowledge proposed to contribute to professionalization attempts and mitigation of tensions emerged after CEO transition	Barroso-Castro <i>et al.</i> , 2005; Daily and Dalton, 1992; van Helvert-Beugels <i>et al.</i> , 2020; Yildirim-Öktem and Üsdiken, 2010; Zahra and Filatotchev, 2004
Professional managers		The hiring of professional managers who bring their own knowledge, experience, and social capital relationships proposed to contribute to the professionalization of an organization	Chang and Shim, 2015; Chittoor and Das, 2007; Costa <i>et al.</i> , 2021; D'Angelo <i>et al.</i> , 2016; Dekker <i>et al.</i> , 2103; Dekker <i>et al.</i> , 2015; Diéguez-Soto <i>et al.</i> , 2016; Dyer, 1989; Gedajlovic <i>et al.</i> , 2004; Hall and Nordqvist, 2008; Hellmann and Puri, 2002; Kaehr Serra and Thiel, 2019; Lin and Hu, 2007; Polat, 2020; Tsui-Auch, 2004
Head(s) of the organization's acquired new knowledge		The acquisition of new knowledge by the head(s) of the organization proposed to have a positive influence on the	Camfield and Franco, 2019a, 2019b; Camisón <i>et al.</i> , 2019; Dyer, 1989; Fernández-Ortiz and Lombardo,

Codes	Descriptions	Representative work
	professionalization of an organization. Willingness and ability to acquire new knowledge is crucial	2009; Loué, 2018; Ottewill <i>et al.</i> , 2000
Individual, explicit knowledge		
	• None	None
Collective, tacit knowledge		
Function-related knowledge	Introduction of collective tacit knowledge associated to specific organizational functions, for instance finance or human resources to assist the professionalization of the function	Barringer <i>et al.</i> , 2015; Camfield and Franco, 2019b; Costa <i>et al.</i> , 2021; Chua <i>et al.</i> , 2009; Dekker <i>et al.</i> , 2015; de Kok <i>et al.</i> , 2006; Guerrero <i>et al.</i> , 2022; Hellmann and Puri, 2002; Madison <i>et al.</i> , 2018; Michiels <i>et al.</i> , 2017; Songini and Gnan, 2009; Yedder, 2018
Community-related knowledge	Development of collective tacit knowledge associated to the community proposed to assist professionalization at the level of the entire organization. Shared stories, intrafirm consultations, knowledge sharing practices, and organizational communication proposed to aid the development of community-related knowledge	Charan <i>et al.</i> , 1980; Fletcher, 2002; Kammerlander <i>et al.</i> , 2015; Polat, 2020; Zahra and Filatotchev, 2004; Zahra <i>et al.</i> , 2007
Collective, explicit knowledge		
Formalized structures	The formalization of the organizational structures proposed to contribute to professionalization attempts (“who does what” knowledge)	Camfield and Franco, 2019a; Chua <i>et al.</i> , 2009; Dekker <i>et al.</i> , 2103; Dekker <i>et al.</i> , 2015; Daily and Dollinger, 1992; Eddleston <i>et al.</i> , 2019; García Pérez de Lema and Duréndez, 2007; Hellmann and Puri, 2002; Lien and Li, 2014; Tam and Gray, 2016

Codes		Descriptions	Representative work
Formalized systems		The formalization of organizational systems proposed to contribute to professionalization attempts (“how to” knowledge)	Heredia-Calzado and Duréndez, 2019; Hellmann and Malo <i>et al.</i> , 2022; Puri, 2002; Polat, 2020
Knowing			
Individual Practices	<ul style="list-style-type: none"> • Strategizing 	Strategizing practices to assist change processes introduced because of professionalization attempts	Kaehr Serra and Thiel, 2019; Hung and Whittington, 2011; Veloso Saes <i>et al.</i> , 2022
	<ul style="list-style-type: none"> • Projecting Professionalism 	Projecting professionalism proposed to be key to professionalization of SMEs	Aragon-Amonarriza and Iturrioz-Landarta, 2019; Cheng and Wong, 2015; Diéguez-Soto <i>et al.</i> , 2016; Dyer, 1989; García Pérez de Lema and Duréndez, 2007; Gaglio, 2013; Parry <i>et al.</i> , 2012; Liljegren, 2012; Udomkit <i>et al.</i> , 2020
Organizational Practices	<ul style="list-style-type: none"> • Training 	Formal training practices proposed to contribute to professionalization of SMEs	Costa <i>et al.</i> , 2021; Dyer, 1989; Eddleston <i>et al.</i> , 2019; García Pérez de Lema and Duréndez, 2007; Pauli, 2020
	<ul style="list-style-type: none"> • Regulating 	Regulating linked to frequent and formal meetings as well as constant monitoring	Charan <i>et al.</i> , 1980; Camfield and Franco, 2019a; Dekker <i>et al.</i> , 2015; Hofer and Charan, 1984
Intervening conditions			
Personal	<ul style="list-style-type: none"> • Personal attributes 	Personal attributes such as demographic characteristics, education level, international experience, duality proposed to influence professionalization attempts	Barringer <i>et al.</i> , 2015; Hsu <i>et al.</i> , 2013; Songini and Gnan, 2009
	<ul style="list-style-type: none"> • Personal values 	Personal values such as solidarity, honesty, self-transcendence, self-enhancement, openness to change proposed to influence professionalization attempts	Camfield and Franco, 2019a; Camfield and Franco, 2019b

Codes		Descriptions	Representative work
	<ul style="list-style-type: none"> • Personal restraints 	Personal restraints including conservation, aversion to risks, emotional ties and psychological problems, opportunism, lower commitment, bifurcation bias, control, and behavioral control	Camfield and Franco, 2019b; Costa <i>et al.</i> , 2021; Chua <i>et al.</i> , 2009; Charan <i>et al.</i> , 1980; Daily and Dollinger, 1992; Madison <i>et al.</i> , 2018; McKelvie <i>et al.</i> , 2021
Organizational	<ul style="list-style-type: none"> • Organizational values 	Organizational values such as norms, goals, meanings, professional values, mutual respect, trust, cooperation, risk taking orientation, technological innovation orientation, and effective communication proposed to influence professionalization attempts	Chau and Wong, 2021; Cherchem, 2017; Costa <i>et al.</i> , 2021; García-Lopera <i>et al.</i> , 2022; Hall and Nordqvist, 2008; Polat, 2020; Polat and Benligiray, 2022
	<ul style="list-style-type: none"> • Organizational restraints 	Organizational restraints such as inertia, institutional pressure and family essence, tensions, and micropolitics proposed to influence professionalization attempts	Chirico and Nordqvist, 2010; Marett <i>et al.</i> , 2020; Chau and Wong, 2021; van Helvert-Beugels <i>et al.</i> , 2020; Tsui-Auch, 2004
External conditions		External conditions proposed to influence professionalization attempts	Child <i>et al.</i> , 2017; Duran <i>et al.</i> , 2016
Consequences			
Organizational	<ul style="list-style-type: none"> • Performance 	A proposed relationship between professionalization of the organization and performance	Chang and Shim, 2015; Dekker <i>et al.</i> , 2015; García-Lopera <i>et al.</i> , 2022; Hodgson, 2005; Lien and Li, 2014; Lin and Hu, 2007; Pauli, 2020; Polat and Benligiray, 2022; Razzak <i>et al.</i> , 2021
	<ul style="list-style-type: none"> • Growth 	A proposed relationship between professionalization of the organization and organizational growth	Costa <i>et al.</i> , 2021; Barringer <i>et al.</i> , 2005; Bruque and Moyano, 2007; McKelvie <i>et al.</i> , 2021
	<ul style="list-style-type: none"> • Internationalization 	A proposed relationship between professionalization of the organization and internationalization of the organization	D'Angelo <i>et al.</i> , 2016; Costa <i>et al.</i> , 2021; Eddleston <i>et al.</i> , 2019; Foscht <i>et al.</i> , 2006

Codes		Descriptions	Representative work
	<ul style="list-style-type: none"> • Innovation 	A proposed relationship between professionalization of the organization and organizational innovation	Barroso-Castro <i>et al.</i> , 2022; Diéguez-Soto <i>et al.</i> , 2016; Duran <i>et al.</i> , 2016; García-Lopera <i>et al.</i> , 2022; Maldonado-Guzmán <i>et al.</i> , 2019
Multidimensionality*			
Feedback loop		Professionalization as complex, multidimensional, not once for all acquired, context-specific, processual	Chau and Wong, 2021; Costa <i>et al.</i> , 2021; Dekker <i>et al.</i> , 2013; Dekker <i>et al.</i> , 2015; Hall and Nordqvist, 2008; Howorth <i>et al.</i> , 2016; Polat, 2020; Polat and Benligiray, 2022; Steward and Hitt, 2012
*Emerged inductively from the analysis of articles			

Table IV. Future Research Directions, Propositions, Research Questions, and Suggested Methodologies and Methods (Source: Author's own work)

Research Directions	Propositions	Research Questions	Suggested Methodologies and Methods
<p>Research direction 1: Investigate the role of individual explicit knowledge during the professionalization of SMEs</p>	<p>P1. Individual explicit knowledge, including its knowledge production and conversion, is likely to influence how SMEs attempt professionalization</p>	<ul style="list-style-type: none"> • How does individual explicit knowledge (e.g., personal notes, summaries, maps, schemes, personal guidelines, and templates) influence the professionalization of SMEs? • Who is more likely to contribute to the production and use of such individual explicit knowledge during the professionalization of SMEs? • How can this individual explicit knowledge be converted into individual or collective tacit knowledge during the professionalization of SMEs? • What facilitates or inhibits this conversion process? 	<p>Qualitative studies using personal diaries, observations, semi-structured interviews, and audio-visual material. Longitudinal studies</p>
<p>Research direction 2: Investigate the role of attention management during the professionalization of SMEs</p>	<p>P2. The management of attention, including competing demands and involved knowledge types, is likely to influence how SMEs attempt professionalization</p>	<ul style="list-style-type: none"> • How do management teams manage their attention during the professionalization of SMEs? • What competing demands that require managerial attention are likely to emerge during the professionalization of SMEs? • How do managers differentiate between working on the business vs. working in the business during the professionalization of SMEs? • What knowledge types could help assist the management of attention 	<p>Qualitative studies using observations, shadowing methods, semi-structured interviews, and audio-visual material. Longitudinal studies</p>

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		<p>during professionalization attempts of SMEs?</p> <ul style="list-style-type: none"> • What theoretical lens could best help the investigation of attention management during the professionalization of SMEs? 	
<p>Research direction 3: Investigate the role of organizational mnemonics during the professionalization of SMEs</p>	<p>P3. Organizational mnemonics, including organizational learning, unlearning and knowledge loss, are likely to influence how SMEs attempt professionalization</p>	<ul style="list-style-type: none"> • What is the role of organizational mnemonics in the professionalization of SMEs? • What is the role of individual and organizational learning? • What is the role of organizational knowledge loss? • What is the role of organizational unlearning? 	<p>Qualitative studies, including grounded theory and case studies. Inductive methods such as individual semi-structured interviews, observations, focus groups, and analysis of private and public documents Quantitative studies that include survey research. Large sample sizes Inclusion of multiple research settings. Mixed-methods studies</p>
<p>Research direction 4: Investigate the professionalization of SMEs processually</p>	<p>P4. Organizational processes, their unfolding, and their facilitating or inhibiting conditions, are likely to influence how SMEs attempt professionalization</p>	<ul style="list-style-type: none"> • What are the processes involved in the professionalization of SMEs? • How do these processes unfold over time during the professionalization of SMEs? • What conditions favor or inhibit processes related to the professionalization of SMEs? 	<p>Qualitative studies using observations, shadowing, semi-structured interviews, archival data, and audio-visual material. Longitudinal studies</p>