



Towards a comprehensive framework of the institutional dimensions in entrepreneurship research

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Abstract Rates of entrepreneurship differ significantly between countries. Previous studies have shown that the institutional context can explain these differences; in particular, the institutional dimensions approach has recently gained attention for its potential to explain entrepreneurial activity across countries. However, it is still unclear how this approach has evolved, what has been advanced and what remains to be done. Through a rigorous systematic analysis of 84 articles published in Q1 journals included in the Journal Citation Reports™ for the period 2000–2025, this study focuses on the utilization of institutional dimensions (regulative, normative and cultural-cognitive) as a conceptual framework, extending beyond the traditional examination of formal and informal

institutions. The main findings reveal that (a) there is no consensus on the variables that measure the institutional dimensions, particularly the normative and cultural-cognitive dimensions; (b) additional research is needed on the interactions between the three dimensions and their effect on entrepreneurship; (c) there are relevant differences in the effects of institutional dimensions on different economic sectors and different types of entrepreneurship, such as opportunity or necessity; (d) each institutional dimension influences differently at each stage of the entrepreneurial process; and (e) there are still few academic publications using the institutional dimensions framework in the field of entrepreneurship, although the number of articles published recently is increasing. From these results, some opportunities for future research lines are derived.

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Plain English Summary What makes some countries lead in entrepreneurship while others lag? This study reviews 84 articles for the period 2000 to 2025 regarding the relationship between institutional dimensions (regulative, normative and cultural-cognitive) and entrepreneurial activity. Moving beyond the traditional focus on formal and informal institutions, this theoretical framework offers a deeper understanding of the influence of institutions on entrepreneurship and the role of the individual in interpreting the institutional context. The main findings reveal inconsistencies in how normative and cultural-cognitive

dimensions are measured, a need for more research on the interplay between institutional dimensions and differences in their impact across economic sectors, types of entrepreneurship (e.g. opportunity- vs. necessity-driven) and stages of the entrepreneurial process. Despite increasing interest, studies using this approach remain limited, revealing potential for future research. These insights call for improved institutional environments to foster entrepreneurship. For policymakers, designing policies tailored to the specific needs and characteristics of their entrepreneurs can foster entrepreneurship and stimulate economic growth.

Keywords Institutional dimensions · Institutional approach · Institutional theory · Entrepreneurial activity · Systematic review · Regulative · Normative · Cultural-cognitive

JEL Classification L26 · O43 · M13 · P48 · Z13

1 Introduction

The OECD (2023) found a striking disparity in self-employment rates between regions, with countries in the European Union averaging 15%, while their counterparts in Latin America show a significantly higher average rate of 35%. Given the empirical evidence highlighting the role of entrepreneurship in driving economic growth (Bjørnskov & Foss, 2016; Bosma et al., 2018; van Stel et al., 2005) and the different rates of entrepreneurial activity across countries, there has been an increase in interest about the factors that foster new business creation (Julien, 2019). Several authors have explained the determinants of entrepreneurship using institutional theory. In general terms, this approach describes the entrepreneurial process through the socio-cultural environment and the legal constraints in each country that determine an individual's decision to start a business (Stenholm et al., 2013). Most of these studies have been based on the influence of formal and informal institutions, while the influence of institutional dimensions (regulative, normative and cultural-cognitive) has received less attention in academic research (Urbano et al., 2019a). The growing recognition of institutions in the form of formal rules, cultural values and shared individual perceptions (i.e. regulative, normative and cultural-cognitive dimensions) plays a crucial role in

shaping entrepreneurship and its outcomes (Bosma et al., 2018; De Clercq et al., 2010).

The institutional dimensions approach goes beyond formal and informal institutions because it includes the cultural-cognitive dimension that recognizes the importance of the individual's social construction based on the cognitive frames conditioning how they interpret and respond to the formal rules and the culture that promotes entrepreneurship (Johansson et al., 2021). Although advances have been made in the use of institutional dimensions in entrepreneurship research, some questions remain unanswered, and the fragmented research may hinder the opportunity to make meaningful and clear contributions to the emerging field. For instance, researchers applying this theoretical approach face challenges, such as the difficulty in achieving clarity regarding the levels at which these dimensions should be measured and studied. Few researchers have considered the country and individual levels simultaneously in their research (Rieger et al., 2021), and most of the studies have based their analysis on one or another without a clear explanation of the reasons. On the other hand, while the initial framework of institutional theory emphasizes the analysis of institutions in interaction to explain individual behaviour (Scott, 1995),¹ there is a lack of clarity on how to study this interaction to explain entrepreneurial activity (Langevang et al., 2015). This relationship becomes even more complex and understudied when considering the diversity within the entrepreneurial phenomenon, such as studying specific niches of entrepreneurs (e.g. high-tech and high-impact entrepreneurs, university entrepreneurship, female entrepreneurship, social entrepreneurship) at different stages of the entrepreneurial process (e.g. latent, emergent, nascent, established) and exploring the motivations for starting a business (opportunity and necessity-driven).

This paper, therefore, analyses an emergent stream of research shedding light on the relationship between regulative, normative and cultural-cognitive dimensions that shape the entrepreneurship phenomenon. The specific objectives of this study are (1) to identify

¹ This quote refers to the first edition (1995) of Scott's work *Institutions and Organizations*; although the fourth edition (2013) is the most recent, institutional dimensions continue to maintain their initial essence, and only exemplifications and extensions have been added to the theory.

the data sources and methodological approaches deployed in prior studies; (2) to identify the contribution of the literature and emerging/missing subjects that can promote research on institutional dimensions and the connection to the entrepreneurship phenomenon; and (3) to propose a theoretical model and future lines of research to study the link between institutional dimensions and entrepreneurship.

The current study contributes to understanding entrepreneurship research that uses institutional dimensions as a conceptual framework. It sheds light on the fundamental underpinnings that should guide research questions, addresses methodological and thematic limitations and offers valuable guidelines for future research. Moreover, this study is the first systematic review to analyse in depth the literature that explains entrepreneurial activity through the lens of the institutional dimensions' framework, which is a constantly expanding research field.

As an antecedent, Urbano et al., (2019a) analysed articles that explored the relationship between institutional theory and entrepreneurship. However, Urbano et al., (2019a) mainly used formal and informal institutions (North, 1990) instead of regulative, normative and cultural-cognitive institutional dimensions (Scott, 1995), and they also included in their review articles focusing on the impact of entrepreneurship on economic growth. While we do not seek to replace the tradition of examining formal and informal institutions, we build on that foundation to illustrate why acknowledging all three institutional dimensions (regulative, normative and cultural-cognitive) enriches our understanding of the entrepreneurial phenomena.

By prioritizing these three dimensions, we do not dismiss the value of existing work; rather, we highlight the added significance of the cultural-cognitive dimension, an often-overlooked element when only formal and informal categories are considered. In doing so, our approach clarifies how the institutional dimensions perspective enhances conceptual frameworks, offering a more comprehensive view of how institutional contexts shape entrepreneurship. Finally, the methodology employed and the proposed model for analysing publications in the field offer a robust and analytical approach, enabling us to develop a sound conceptual contribution (Fan et al., 2022).

After this introduction, the following section presents the interface between institutional theory and

entrepreneurship, highlighting the institutional dimensions framework. In the third section, the methodology used is outlined. The systematic literature review results are described in Section 4 and analysed in Section 5. Finally, in the last section, we discuss the main findings of the study and conclude with a future research agenda and the limitations of the review.

2 Institutional theory and entrepreneurship research

Institutional theory, one of the major frameworks in social sciences for understanding how institutions shape social behaviour (Scott, 2004), has a rich and complex history that dates to the mid-nineteenth century. As Ostrom (2005) observes, “one of the most difficult problems to overcome in the study of institutions is how to identify and measure them” because they are invisible shared concepts that exist in the minds of individuals. Rather than being a single, unified system of assumptions and propositions, it represents a broad theoretical perspective or family of approaches, shaped by the fields of economics, political science, sociology and psychology (Scott, 2004), each with its own vocabulary and multiple levels of analysis.

In the 1950s, with the emergence of organizations as a recognized field of study, researchers started applying institutional arguments to explain the structure and behaviour of organizations. These new approaches, called neoinstitutionalism, “both built on and departed from” the insights of earlier institutionalists (Scott, 2004), thus:

- a) *Neoinstitutional Theory in Economics* brings together a wide array of contributions (Scott, 2004) such as transaction cost and property rights analysis (Ronald Coase, John Commons, Oliver Williamson, Douglass North), bounded rationality (Herbert Simon), innovation (Joseph Schumpeter), game-theoretic approaches (Elinor Ostrom), evolutionary theory (Richard Nelson and Sydney Winter) and resource-based theory (Edith Penrose). A particularly significant contribution to this field is New Institutional Economics, which builds on the literature of transaction costs, property rights and public choice (North, 1986). Specifically, North (1990, 1991) defines institutions as the human-devised constraints that

structure political, economic and social interactions. These constraints define and limit individual choices, thereby enabling the creation of a stable structure that reduces the uncertainty in human interactions (North, 1990). Institutions include formal rules (such as constitutions, statutes and common laws, regulations), informal constraints (such as conventions, norms of behaviour and self-imposed codes of conduct) and their enforcement characteristics.

- b) ***Neoinstitutional Theory in Political Science*** assembles two distinct branches: historical institutionalism and rational choice theory. Historical institutionalism analyses political systems and the power asymmetries that shape the functioning and evolution of institutions (Scott, 2013). A seminal contribution in this tradition is the framework of inclusive versus extractive institutions, developed by Acemoglu, Johnson and Robinson—2024 Nobel Prize laureates—which illustrates how arrangements endure when they benefit dominant coalitions and how political power conditions economic outcomes (Acemoglu et al., 2002). Rational choice theory, by contrast, extends the neoinstitutional approach in economics to political systems and explains how institutions emerge and take specific forms to resolve collective-action problems (Scott, 2013).
- c) ***Neoinstitutional Theory in Sociology*** integrates insights from cognitive psychology, cultural studies, phenomenology and ethnomethodology. This approach emphasizes cognitive over normative frameworks and highlights the influence of cultural belief systems in the environment of organizations (Scott, 2013, p. 53). The macro-level (environment) perspective in sociology, elaborated by DiMaggio and Powell (1983) and by Meyer and Scott (1983), has become the dominant approach. DiMaggio and Powell (1983) identified three mechanisms—coercive, mimetic and normative—through which institutional pressures diffuse across organizational fields, emerging structural isomorphism.

Building on these foundations, Scott (1995, 2013) developed an analytic framework that focuses on organizations and stated, “institutions comprise regulative, normative and cultural-cognitive elements that, together with associated activities and resources,

provide stability and meaning to social life” (p. 56). Different social theorists have singled out each element as *the* vital ingredient of institutions. Economists, particularly institutional economists such as Douglas North, “likely to view institutions as resting primarily on the regulatory pillar”, with coercion serving as the primary mechanism of control (Scott, 2013, p. 60). A second group of theorists views institutions as being primarily grounded in a normative pillar, emphasizing how shared values and norms embed a prescriptive, evaluative and obligatory dimension into social life, emphasizing “appropriate” behaviour (shaped by situational demand and the actor’s role) versus “instrumental” behaviour, which centres on the actor’s own preferences and self-interest (Scott, 2013). The third group, principally anthropologists, focuses on cultural-cognitive elements of institutions: the shared meanings and mental models that shape social reality. This reality takes shape through social interactions, where individuals create and share their understandings of what is happening (Scott, 2004, p. 411). Cultural-cognitive theory, the most recently developed conception of institutional structures and processes, provides the deeper foundations of institutional form (Scott, 2004, p. 429).

The main implication of this concept that differentiates institutional dimensions from the formal and informal institutions framework is that, as Scott (2013, p. 56) notes, institutions encompass the three dimensions, which jointly shape social behaviour. Rather than seeking an integrated conception or relying on a single theory, greater progress can be achieved by examining each element of institutions in turn and clarifying its assumptions, mechanisms and indicators (Scott, 2013, p. 59).

In entrepreneurship research, formal and informal institutions have commonly been used to explain differences in entrepreneurial activity between countries (Urbano et al., 2019a; Welter and Smallbone, 2011). However, the institutional dimensions (Scott, 1995) have had a slower and more recent application to analyse the general entrepreneurial activity (Valdez & Richardson, 2013) or entrepreneurial diversity/types of entrepreneurship (Welter et al., 2017), such as social entrepreneurship (Ghazali et al., 2021) or high-tech entrepreneurship (Eesley et al., 2016). In this study, we follow Carlsson et al. (2013) in defining the entrepreneurship domain. We therefore consider entrepreneurship to be a phenomenon that is reflected

at the individual level (different types of entrepreneurs), the venture and firm level (corporate entrepreneurship) and the country level (entrepreneurial activity, new business creation).

Although formal and informal institutions present differences in terms of institutional dimensions (regulative, normative and cultural-cognitive), they remain connected. Formal institutions predominantly operate within the regulative dimension due to their codified nature and explicit enforcement mechanisms. However, they are not limited to this dimension and may also intersect with normative and cultural-cognitive dimensions, particularly when formal rules embody shared values or cultural assumptions. Furthermore, North's approach (North, 1990) is deterministic from the institutional environment perspective as it considers the individual partially (North, 2005). In contrast, Scott (1995) assigns much greater importance to the individual. The cultural-cognitive dimension helps to explain different individual behaviours under similar institutional pressures.

Kostova (1997) introduced the idea of a country's institutional profile, which examines how government policies, social norms and shared social knowledge affect domestic business activity. Busewitz et al. (2000) developed a tool to measure this profile specifically for entrepreneurship, which has been validated and adapted to analyse the influence of the institutional dimensions in different countries (Gupta et al., 2012; Manolova et al., 2008; Spencer & Gomez, 2004). Therefore, prior research (Stenholm et al., 2013; Urbano & Alvarez, 2014) found institutional dimensions to be a solid theoretical framework in entrepreneurship research and has been used to explain how environmental factors influence entrepreneurial behaviour with a strong emphasis on the individual's role. Dimensions reveal how the institutional environment affects the individual's decision to start a new venture, particularly the cultural-cognitive dimension, highlighting the relationship between the environment and the individual.

Subsequently, we will delve into the theoretical underpinnings and seminal authors that have been foundational for each institutional dimension. Following this exploration, we will establish their connection with the entrepreneurial activity.

The regulative dimension influences future behaviour through its espousal and insistence on establishing rules, carrying out inspections, manipulating

sanctions and giving rewards or punishments (Scott, 1995). The regulative dimension within a society encompasses legal procedures, written rules and governmental actions that play a pivotal role in shaping the entrepreneurial landscape. This argument delves into the main theories that have attempted to analyse and define the regulative dimension's impact on entrepreneurial activity. The discussion revolves around the assertion that less democratic governments tend to regulate more heavily, with limited visible social benefits, primarily benefiting politicians and bureaucrats (Djankov et al., 2002). One prominent lens through which to examine the regulative dimension is coercive isomorphism, a concept introduced by DiMaggio and Powell (1983). Coercive isomorphism operates through diffuse informal mechanisms or highly formalized processes involving specialized actors such as the police and courts (Scott, 2013). The primary mechanism of control in coercive isomorphism is coercion, which, contrary to its connotations, encompasses various regulatory processes that empower and constrain social actors. For its part, Williamson (2000) examines formal rules and governance structures. This involves the study of legal systems, contracts and other formal mechanisms that guide economic interactions. Institutions such as property rights, contracts and legal frameworks are central to this level. Williamson argues that formal rules play a critical role in reducing transaction costs and facilitating economic exchanges. The emphasis is on the design of governance structures to address issues of opportunism and uncertainty. Regulatory processes in the private, market-based sector often rely on positive incentives, such as increased returns and profits. In contrast, public actors involved in regulating the private sector predominantly employ negative sanctions, including taxes, fines and even incarceration. The nuanced interplay of positive and negative incentives within the regulatory framework illustrates the multifaceted nature of the regulative dimension. Less democratic governments, driven by coercive isomorphism, tend to wield a heavier regulatory hand, creating an environment that may not necessarily yield visible social benefits. Djankov et al. (2002) argue that such regulatory practices primarily serve the interests of politicians and bureaucrats, creating a paradox where the regulatory system ostensibly designed for societal welfare becomes a tool for vested interests. Moreover, the coercive pressures

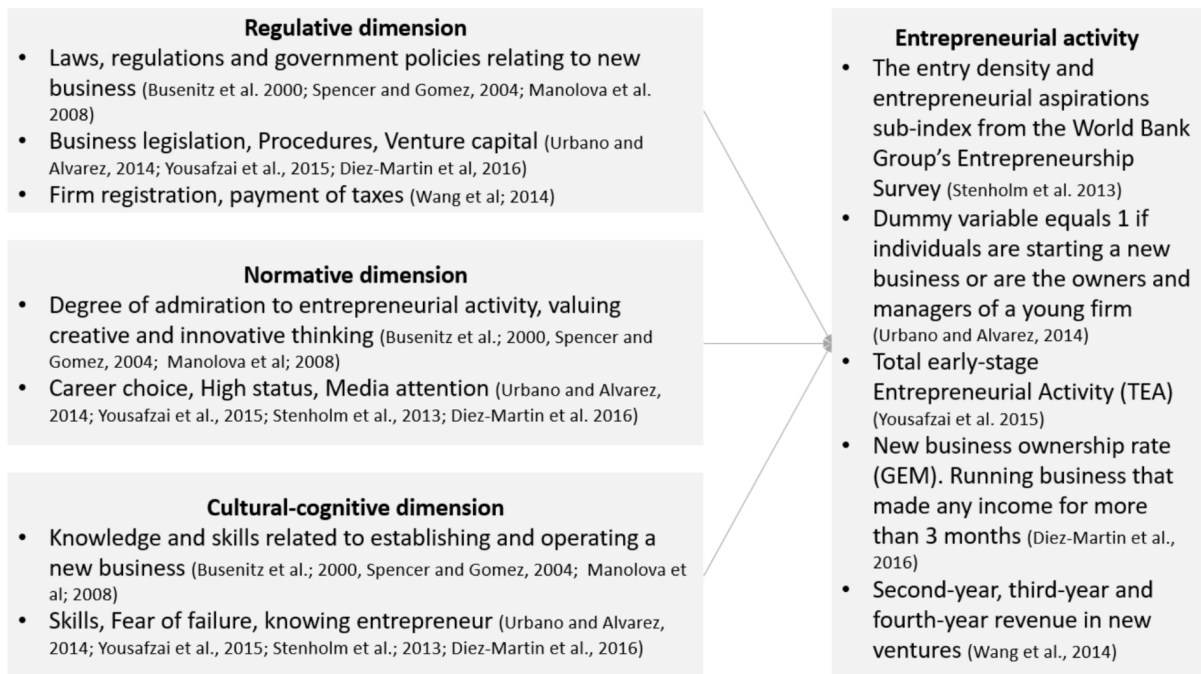
inherent in regulatory processes can significantly impact entrepreneurial activity. Coercive pressures, often stemming from resource dependence, can lead organizations to adopt specific practices to qualify for state grants and other benefits. This phenomenon highlights the intricate relationship between regulatory dimensions and entrepreneurial behaviour. Government mandates, budget cycles, financial reporting requirements and regulatory agencies are all potential sources of coercive pressure that shape organizational behaviour. The regulative dimension is more readily adjustable than the normative or cultural-cognitive dimensions, because new laws can be enforced each time the government has a particular interest; however, it is challenging to implement a regulative institution without it being legitimized by the other two institutions. This dimension in the entrepreneurship field is represented through the policies framed in various countries that encourage entrepreneurial activity (Busenitz et al., 2000).

The normative dimension includes the behavioural goals in society while articulating the correct way to pursue them. It implies a system of values (concepts of a desirable behaviour together with the construction of standards against which existing behaviours can be assessed) and norms (how things should be done). Because it is rooted in culture and values, this dimension tends to be resistant to change (Scott, 1995). In entrepreneurship, the normative dimension is reflected in common beliefs about being an entrepreneur and the legitimacy accorded to this profession; similarly, the appropriate forms are socially accepted by community members when creating a new company (Busenitz et al., 2000). Understanding the normative dimension, which includes culture, social norms and societal values, is crucial for comprehending and influencing entrepreneurial activity. DiMaggio and Powell (1983) show that inter-organizational networks foster normative isomorphism, creating conformity and shared definitions of rational behaviour. In entrepreneurship, such isomorphic pressures lead entrepreneurs to adopt practices considered legitimate in their environment. Williamson (2000) situates informal institutions at the first level of social structure, highlighting their inertia and influence on conduct. Similarly, Shapero and Sokol (1982) demonstrate how social and cultural factors embed entrepreneurship in broader societal contexts. Together, these perspectives underline that the normative dimension

operates through values and informal rules that channel economic and entrepreneurial activities.

As we mentioned, one of the significant contributions to the literature lies in the examination of the third dimension, the cultural-cognitive, which extends beyond formal and informal constraints and incorporates individual perspectives. North (2005) underscores the importance of individual beliefs in shaping choices, structuring changes in the human landscape and understanding societal beliefs. This dimension emphasizes the role of the individual mind as a crucial factor in comprehending cultural and cognitive influences.

The cultural-cognitive dimension represents the social construction of actors and interests based on cognitive frames that condition how individuals interpret and respond to the world around them (Scott, 1995). As Scott (2013) argues, sociologists such as DiMaggio, Powell and Meyer emphasize the significance of cultural-cognitive aspects in institutions, which involve shared conceptions shaping social reality and framing the creation of meaning. Attention to this dimension is a distinctive feature of neoinstitutionalism in organizational studies, emphasizing that actors' behaviour is influenced by internalized symbolic representations. A central mechanism is mimetic isomorphism, whereby organizations imitate practices perceived as legitimate or successful (DiMaggio & Powell, 1983). In entrepreneurship, these imitated practices gain legitimacy when aligned with shared values and cognitive frames. McClelland's (1961) theory on the Need for Achievement aligns with this cultural-cognitive dimension. He argues that individuals with a high need for achievement possess a strong desire to set challenging goals, take calculated risks and derive intrinsic satisfaction from overcoming challenges. Importantly, McClelland highlights that this trait is not purely individual but is shaped by cultural and societal factors, which can foster or inhibit its development. This perspective helps explain differences in entrepreneurship across cultures: societies that value achievements create environments more conducive to entrepreneurial activity. Entrepreneurs often display a strong need for achievement, as their ambition to set and accomplish demanding objectives and their willingness to take risks mirror the characteristics described by McClelland. Scott's (1995) cultural-cognitive dimension delves into how shared beliefs, values and cognitive



The operationalization of the dimensions in this figure highlights the alignment of formal and informal institutions with the institutional dimensions. While formal institutions are strongly associated with the regulative dimension due to their codified and enforceable nature, they are not entirely synonymous. Similarly, informal institutions primarily align with the normative and cultural-cognitive dimensions. However, the cultural-cognitive dimension uniquely encompasses the role of the individual, which is not explicitly addressed in the traditional formal and informal institutional perspective

Fig. 1 Prevailing model—current understanding of the relationship between institutional dimensions and entrepreneurial activity

frameworks shape institutional practices in a society. This perspective highlights the cultural environment's role in nurturing or hindering the development of a high need for achievement among individuals.

The cultural-cognitive dimension emphasizes the socially constructed belief systems and shared mental models that shape how individuals perceive their entrepreneurial capabilities (such as the knowledge and skills necessary to launch a new venture) within a broader institutional context (Alvarez et al., 2025; Urbano & Alvarez, 2014). At the country level, knowledge is institutionalized because certain information is shared by all or most inhabitants; for example, the steps to start a business can be very clear in some countries, while in others, few people may be interested (Busenitz et al., 2000). The cultural-cognitive dimension is increasingly important to

entrepreneurship research in terms of how societies accept entrepreneurs, inculcate values and even create a cultural climate that normalizes and encourages entrepreneurial activity (Bruton et al., 2010, p.423).

Figure 1 illustrates the foundational model, representing our initial understanding of the relationship between institutional dimensions and entrepreneurial activity. This model acts as the cornerstone from which we have derived a new framework by introducing propositions, informed by a thorough analysis of the literature.

It is important to acknowledge that there are also authors who have proposed additional dimensions/pillars such as conducive, creativity, social and sustainability (Alt & Craig, 2016; Audretsch et al., 2021, 2023a, b). For instance, Audretsch and Belitski (2013) and Belitski and Desai (2016) have discussed the concept of creativity spillover as a new

dimension. They argue that cities with a higher proportion of the creative class (Florida, 2014) tend to show a wide range of diversity, cultural inclusivity and a well-developed high-tech industry. Other authors have included the conducive pillar, arguing that it would allow for a more comprehensive analysis of the institutional factors that influence entrepreneurial outcomes, especially for high-growth and innovative entrepreneurship (Bogatyreva et al., 2022; Estrin et al., 2013; Stenholm et al., 2013). Nevertheless, integrating these additional dimensions, which remain in an early stage of theoretical development, falls outside the scope of this review. A more rigorous approach would entail clearly defining each new pillar, delineating its differences from the established dimensions and ensuring its alignment with existing theoretical frameworks.

3 Methodology

Although systematic literature reviews (SLR) are increasing in management research, we still have a small number of publications compared to other research fields. For example, Williams Jr. et al. (2021) indicate that between 2003 and 2019, 7386 SLRs were published in medical sciences, 4264 in dentistry and 6643 in psychology. Meanwhile, only 967 SLRs were published in management. Given this very low proportion of SLRs in management, it is essential to explore methodological aspects in greater depth, especially considering the lack of consensus among academics and the inherent difficulty in sample selection criteria.

A recent article published in *Organizational Research Methods* (Hiebl, 2023) provides insights into critical decisions for sample selection. According to this study, SLR, including the sample selection process, should meet three desired attributes: (1) structured, (2) transparent and (3) comprehensive. The *structured* nature of a review implies that every step in the process must be clearly justified, well-explained and not arbitrary. Tranfield et al. (2003) added that a structured search should be based on a clearly defined research question(s) to be answered by a SLR, followed by the “identification of keywords and search terms, which are built from the scoping study, the literature and discussions within the review team” (p.

215). *Transparent* refers to describing the methodological steps undertaken to arrive at the final sample, including a full disclosure of the studies selected in the review. A *comprehensive* review seeks to include all relevant research items. Relevance in this context is determined by (a) its contribution to answering the predefined research question and (b) its compliance with the established inclusion and exclusion criteria. As detailed in this methodological section, the present review adheres to these three attributes.

To identify relevant articles, we applied the systematic six-step procedure proposed by Aguinis et al. (2018), which aligns with the three attributes outlined below.

Step 1: Scope of review. Following Paul and Rialp’s ((2020) classification, we conducted a theory-based review. That is, we synthesize and help advance a body of literature (entrepreneurship research) that uses and/or empirically applies a given underlying theory (institutional dimensions framework).

The research question is the foundation step for establishing the inclusion criteria for articles in a SLR (Williams Jr. et al., (2021)) and may be defined more narrowly or more widely, according to the author’s discretion (Hiebl, 2023; Petticrew & Roberts, 2012). Indeed, the purpose of a systematic literature review is to provide a comprehensive overview of literature related to a specific research question and synthesize previous work to conclude what we know and do not know about a given question (Williams Jr. et al., (2021)). Then, according to Fig. 2, our research question is as follows: *In what ways (specifically how, who, where, why, what and when) does the institutional dimensions approach (regulative, normative and cultural-cognitive dimensions) contribute to entrepreneurship research?*

Accordingly, we develop a theory-based systematic review focused on the relationship between institutional dimensions and entrepreneurship.

Initially, we considered a broader scope review, examining the application of institutional theory (both formal and informal institutions) to entrepreneurship research. However, to ensure the relevance and impact of our review, we followed Paul and Rialp’s (2020) recommendation to prioritize thematic novelty and avoid well-covered topics, especially those recently published in high-impact journals. A search of the existing literature revealed a lack of systematic reviews that explicitly examined the link between institutional dimensions and entrepreneurship. Prior reviews adopted a broader lens, addressing

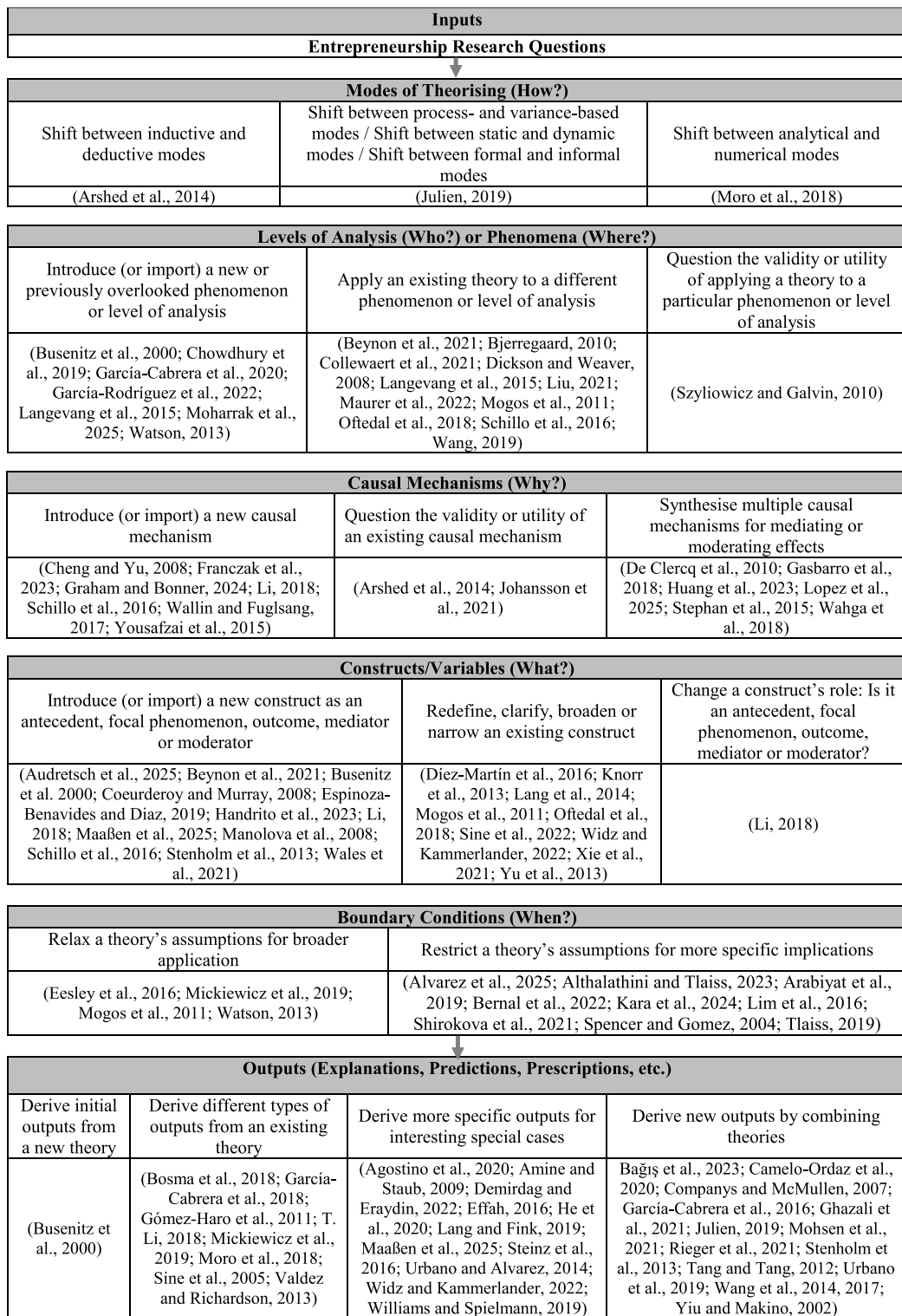


Fig. 2 Contributions to entrepreneurship research from the institutional dimensions approach. Source: self-elaboration based on Makadok et al. (2018)

institutional theory and entrepreneurial activity. For example, in 2010, a special issue of the *Entrepreneurship Theory and Practice* focused on institutional theory and its application to entrepreneurship. Its editorial article presented a systematic review, across nine journals with citation impact factors above or near 2.0, covering the period 1999–2009, yielding a final sample of 46 articles that primarily employed institutional theory (Bruton et al., 2010). The main conclusion was that the theory has matured, and it is therefore “time to employ new and richer insights and uses of the theory”. Later, in 2017, again, *Entrepreneurship Theory and Practice* published a SLR focused on entrepreneurship studies that apply institutional theory (Su et al., 2017). This review covered the period between 1992 and 2014 and included 11 journals from entrepreneurship, general management and international business research areas. The final sample included 194 articles, 137 empirical and 57 conceptual. The review finds that institutional theory has become a widely adopted approach in entrepreneurship research, experiencing significant growth in the number of studies. Finally, in 2019, *Small Business Economics* published a 25-year (1992–2016) systematic review focusing on (a) institutional factors affecting entrepreneurship; (b) the entrepreneurship impact on economic growth; and (c) the overall sequence linking institutions, entrepreneurship and economic growth (Urbano et al., 2019a). This review found that the two dominant theoretical frameworks were (a) the institutional approach, drawing on North’s concept of institutions, and (b) Scott’s institutional dimensions.

In summary, although high-impact literature reviews have examined the application of institutional theory to entrepreneurship, none has specifically analysed the relationship between the institutional dimension’s framework and entrepreneurship, further justifying the need for the current SLR. This perspective is also strengthened by a theoretical argument put forward by North (2010), who stated that “the integration of institutional analysis with a culturally conditioned approach to cognitive science seems to me to be the most promising approach”.

Step 2. Journal selection procedures. We conducted a keyword search in Web of Science, focusing on the title, abstract and full text of the articles. The search included the following terms: “*institutional dimensions/Pillar*”, “*dimension/Pillar*”, “*cultural-cognitive*”, “*regulative*”, “*normative*”, “*Scott*” and

combinations (AND/OR) with “entrepreneurial”, “entrepreneurship”, “entrepreneur”, “new venture”, “start-up”, “small business or SMEs”, “new firm creation”, “new firm formation” and “intrapreneur”.* The search was limited to articles in English within the Social Sciences Citation Index, resulting in a total of 1153 articles across multiple categories. The top ten categories were Business (335), Management (324), Environmental Studies (89), Economics (87), Political Science (73), International Relations (70), Environmental Sciences (58), Green Sustainable Science Technology (51), Ethics (42) and Sociology (42).

Following the criteria established by Aguinis et al. (2023), we select leading Q1 journals using the Journal Citation Reports, which rank journals based on their impact factor. The impact factor is a ratio between the number of current year citations and the number of citable items published in that journal during the previous 2 years. First proposed in 1955 by Eugene Garfield (2006), the impact factor, although imperfect and lacking a superior alternative, is widely used as a measure of journal influence and quality (Aguinis et al., 2019). However, this indicator shows considerable variability (Campanario, 2011); therefore, we also include Q1 journals based on the 5-year impact factor, which considers citation data over 5 years. Both indicators complement each other to reflect “the prestige, reputation and influence of the journals through the prism of the average productivity of journals and the citedness counts of articles published in the journals for a longer time” (Jacso, 2009, p. 611). The resulting database after applying this filter includes 347 articles.

Step 3. Article selection procedures. All papers included in the database were manually read/checked to exclude papers in accordance with the definitional and search parameters, with the initial focus being the title and abstract. Only articles were selected, and books, book chapters and conference proceedings were excluded. According to our research question, we also excluded the papers considering institutional dimensions outside the entrepreneurship field and those considering institutional theory but not specifically institutional dimensions. Finally, we fully read through the articles to ensure that they met the objectives of the SLR. We obtained a final sample of 84 articles for analysis in this study. A complete list of the articles is provided in Appendix 1.

Step 4. Categorization of the articles. To identify potential clusters and themes within the preselected literature, the data collected from the Web of Science were imported into the R software, along with the Bibliometrix package, specifically the Biblioshiny app (Aria & Cuccurullo, 2017). Using bibliometric techniques, we analysed the data using a range of activity indicators, including the total number of publications, citations and average citations per paper. Visual analysis was conducted, including co-occurrence networks and thematic maps.

Steps 5 and 6. Creation of content analysis taxonomy and coding of features. After the first descriptive analysis and definition of the sample, we studied the articles, considering their contributions to entrepreneurship literature. For this purpose, we followed the editorial article from the Special Issue on New Theory in Strategic Management (Strategic Management Journal, Volume 39, Issue 6, June 2018), which offers a practical guide to understanding and classifying aspects of a theory where contributions can be made (Makadok et al., 2018). Therefore, based on their taxonomy, we characterize the state of the contributions to the relationships between institutional dimensions and entrepreneurial activity in terms of the mode of theorizing, level of analysis, understanding of the underlying phenomenon, causal mechanisms, constructs/variables and boundary conditions.

Step 7. Discussion of future research agenda. This section outlines what has been done, what remains to be done and what challenges exist (developed later in the current review).

4 Systematic review: descriptive analysis

The results show that an important percentage of the articles (40%) were published in entrepreneurship journals. Ten articles were published in *Small Business Economics*; seven in the *International Journal of Entrepreneurial Behavior & Research*; and six in *Entrepreneurship and Regional Development*. This was followed by the *Journal of Small Business Management*, *Entrepreneurship Theory and Practice* and the *International Entrepreneurship and Management Journal*, with three articles each. Finally, the *International Small Business Journal* published two articles, while the *Strategic Entrepreneurship Journal* and the

Journal of Business Venturing published one article each. The publication trends reveal the relevance of the entrepreneurship field and the low rate of publication of articles on this subject (Appendix 2 provides the detailed number of articles per year and journal).

The number of articles has increased, particularly since 2016. Although the first article appeared in 2000, the number of publications has fluctuated over time. Only 12 articles were published in the 10 years (2000 and 2010). Between 2011 and 2015, 16 articles were published. Notably, a significant advancement in research was observed between 2016 and 2020, with 29 articles published. The remaining 27 articles appeared between 2021 and mid-2025, demonstrating the growing interest in this field.

We also analysed the techniques that were used in both theoretical and empirical research. Quantitative studies were predominant, with 57 articles; the most used methods were multiple regression, followed by structural equation models. Only eight articles used multilevel analysis, and six used panel data. An article discusses artificial intelligence methodologies, specifically machine learning algorithms. Qualitative research was conducted in 18 studies, including eight case studies, five qualitative comparative analyses (QCA) and seven using other qualitative approaches such as thematic analysis, content analysis and ethnography. Finally, only six articles were theoretical, while three studies combined qualitative and quantitative analyses.

Regarding the sources of information in the empirical studies, 40 used secondary data, 33 gathered primary data, and five used both. The main database used to measure entrepreneurship variables was the Global Entrepreneurship Monitor (GEM). This was followed by the Global University Entrepreneurial Spirit Students' Survey (GUESSS), the World Values Survey (WVS), the World Bank Group's World Business Environment Survey (WBES), the Doing Business Report (EDBI) and the World Competitiveness Report (WCR). Specific entities in each country were used for information related to the context and other regulatory aspects.

The authors with the most publications using the institutional dimensions framework for the analysis of entrepreneurial activity are Urbano (6), Alvarez (4), De Clercq (3) and Lopez (3). The remaining authors have each published one or two articles. Regarding the number of authors and co-authors per paper, 8 publications had a single author, 18 had two authors, 34 had three authors, and 24 had four or

more authors. These figures highlight the collaborative nature of research in this field, as 73% of the publications involved three or fewer researchers.

To approximate the activity of national groups, we analysed the articles based on the authors' country of affiliation. The countries with the highest number of authors were the USA (125), followed by the UK (45), Spain (23), China (22) and Canada (14). Although the importance of studying the institutional dimensions in different contexts is highlighted, there is low participation by Latin American and African authors.

Regarding theoretical frameworks, the institutional dimensions encompass a wide range of niches within entrepreneurship research. This diversity is characteristic of the field as a whole, where scholars often concentrate on specific subdomains. To make a novel contribution beyond existing themes, we examined how this body of literature advances theory by embracing the inherent diversity within entrepreneurship.

5 Thematic analysis, theory contribution and propositions

As previously mentioned, the studies analysed were classified based on their theoretical contributions to the field of entrepreneurship, as illustrated in Fig. 2. In addition, we present a thematic analysis of the articles included in this systematic review to further highlight these contributions. From this analysis, we propose nine key propositions that synthesize the findings and identify the main areas where future research should focus, aligned with our research question: In what ways (specifically how, who, where, why, what and when) do the institutional dimensions approach (regulative, normative and cultural-cognitive dimensions) contribute to entrepreneurship research?

5.1 Modes of theorizing

Contributions to entrepreneurship research that discuss the necessity of changing the *modes of theorizing* are scarce. As mentioned, most of the research in the field is quantitative and follows the same pattern; however, it is evident in the discourse that quantitative and qualitative methodologies answer different questions. We found three papers that made changes in the modes, either by moving from deductive to inductive methods (Arshed et al., 2014), switching between

static and dynamic modes (Julien, 2019) or changing between analytical and numerical modes (Moro et al., 2018). Therefore, there is a call in institutional theory to carry out more mixed methods studies. For instance, the research by Julien (2019) built an integrative model that is quite different from the models usually offered in the field and proposed a dynamic model that includes the institutional context (regulative, normative and cultural-cognitive dimensions) as a part of a bigger picture in which the entrepreneurial activity is immersed. This is significant because it shows how the institutional dimensions approach interacts with other theories to explain entrepreneurship. We thus derive the following proposition:

Proposition 1: The influence of institutional dimensions on the entrepreneurship phenomenon is complex and requires qualitative, quantitative and mixed methods analysis.

5.2 Level of analysis and phenomena

The authors who contribute to the field by studying different *levels of analysis* and specific *phenomena* choose their topic depending on their particular interests while ignoring, to some extent, the previous literature that also considers the same level of analysis.

From a country-level perspective, Urbano and Alvarez (2014) showed that better institutional dimensions (fewer procedures, higher media attention for new business, better entrepreneurial skills and less fear of failure) increase the probability of individuals engaging in nascent entrepreneurship. Díez-Martín et al. (2016) affirmed that more entrepreneurial legitimacy in regulative, normative and cultural-cognitive dimensions results in greater entrepreneurial activity rates, specifically for innovation-driven countries. Other authors have shown how the institutional dimensions work together to promote entrepreneurship and add the role that those institutions play in venture capital development (Maurer et al., 2022), business angel investment and their governance arrangements (Collewaert et al., 2021). These results align with Busenitz et al. (2000), whose seminal work analysed country-level institutional differences and their impact on different types and levels of entrepreneurship. They showed that countries with different profiles can favour different types of entrepreneurship, such as small family businesses or technology firms. For instance, the distance between

the origin and host countries in the normative dimensions hinders new immigrant entrepreneurship opportunities (García-Cabrera et al. (2020). Moharrak et al. (2025) present and theorize the emerging phenomenon of international hidden entrepreneurs in Saudi Arabia, illustrating how they arise from institutional pillars within a restrictive regulatory context.

Regarding female entrepreneurship, Yousafzai et al. (2015) and Xie et al. (2021) showed that the regulative dimension, entrepreneurial cognitions and entrepreneurial norms benefit women's entrepreneurship leadership, particularly when supported at the country level. Similarly, in the specific context of Africa, Langevang et al. (2015) and Amine and Staub (2009) showed how regulative, normative and cultural-cognitive dimensions promote the emergence of female entrepreneurial activity. Wang et al. (2019) found that the lack of growth ambition for female entrepreneurs in China is due to the flawed perceptions of the regulative and cultural-cognitive dimensions compared to their male counterparts. Wang et al. (2019) discussed the lack of institutional conditions necessary to ensure the growth and survival of the companies in the first stages. These studies underline the importance of institutional support for women entrepreneurs during the early stages of their ventures.

Additionally, although there is considerable interest among scholars in investigating how institutional dimensions affect entrepreneurial diversity, there remains a deficiency in conducting thorough analyses that differentiate the entrepreneurial process (Audretsch et al., 2022a, b, 2023a, b). Considering this group of studies and the nascent stage of the business analysed, we propose the following:

Proposition 2a: In the first stages of entrepreneurship, institutional dimensions favour various forms (such as female, small family businesses, social entrepreneurship or technology new firms). These effects vary across countries and regions, with notable constraints particularly on immigrant entrepreneurs due to normative dimension disparities.

Another group of studies considers a more advanced stage of entrepreneurship, in which the effect of institutional dimensions is different. For instance, considering international entrepreneurship, institutional dimensions explain the international performance of small and medium firms. Yiu and Makino (2002) found that regulative, normative

and cultural-cognitive dimensions explain the choice of a company to enter the global market, as businesses fit the institutions of a new country. They also showed that regulative and normative dimensions might explain the cross-national variations, while the cultural-cognitive dimension might explain the cross-firm variations in the choice of entry mode. Prior research has underlined the importance of an entrepreneur's favourable perception regarding the institutional dimensions that benefit firm internationalization (García-Cabrera et al., 2016; Li, 2018). Mogos et al. (2011) found that the three dimensions explain why small- and medium-sized enterprises (SMEs) from some countries have an export advantage. Other authors have found that the normative and regulative dimensions have the most decisive impact, with pressures on decision-making having a negative relationship with the SME's international market orientation (Williams and Spielmann, 2019). However, Szyliowicz and Galvin (2010) showed that international entrepreneurship scholars have not sufficiently explored institutional theory.

Regarding corporate entrepreneurship and the advanced stages of the entrepreneurial process, some authors have indicated that entrepreneurial orientation is motivated by the normative, regulative and cognitive institutional dimensions that exist in a firm's institutional environment (Dickson & Weaver, 2008; Tang & Tang, 2012). Similarly, other authors have suggested that the normative and cognitive dimensions influence entrepreneurial orientation, while the regulative dimension influences the type of corporate entrepreneurial activity developed (Gómez-Haro et al., (2011). Wang et al. (2017) found that new entrepreneurial ventures could achieve higher performance if they made cognitive, regulative and normative legitimization efforts to meet the expectations of their customers and suppliers. Based on the previous literature, we propose the following:

Proposition 2b: In the later stages of entrepreneurship, especially during growth or internationalization, the regulative dimension (specifically financial support) has a significantly greater impact.

Additionally, we found that some research has examined the role of regulative, normative and cultural-cognitive dimensions in areas where this theoretical approach is not typical—for example, to explain family support for children's entrepreneurial behaviour (García-Rodríguez

et al. (2022), entrepreneurial exit rates across countries and in emerging economies (Beynon et al., 2021) and the institutionalization of family businesses (Liu, 2021). Other studies, such as Wang et al. (2014), have added early customers to the analysis and shown their benefits, which are higher when there are previous favourable cognitive and regulative dimensions.

In terms of knowledge transfer research, Bjerregaard (2010) found that the three institutional dimensions affect collaborative work between new firms and research groups in public universities; these institutional logics facilitate the ongoing knowledge exchange between these two sectors. Mickiewicz et al. (2019) found that the legitimacy of the tax authorities and the government (normative), the feeling of belonging to the nation (cultural-cognitive) and the perceptions of the risk and severity of punishment (regulative) are associated with an entrepreneur's attitudes towards tax evasion. Finally, in critical studies from an ethnographic perspective, Watson (2013) supported the importance of expanding entrepreneurial research to strike a balance in the analysis of the concept of entrepreneurial action within an institutional context while also paying attention to issues at the individual, organization and social levels.

As we mentioned, while there is a noticeable interest within the academic community in exploring the impact of institutional dimensions on different types of entrepreneurship across various sectors, there is a lack of comprehensive analysis that distinguishes the entrepreneurial process. Consequently, we have observed that previous research fails to differentiate between latent, emerging and established entrepreneurial activities across the sectors (Audretsch et al., 2022a, b), which is crucial for comprehending the existing disparities and formulating more effective research to inform social implications and policy impacts (OECD, 2023). Considering the prior literature, we put forward the following proposition:

Proposition 3: Institutional dimensions operate at the individual (cultural-cognitive), family (normative), organization/university and country levels (regulative and normative).

5.3 Causal mechanisms

A causal mechanism explains why the relationships or effects proposed in a theory occur (Makadok et al.,

2018). Research can advance theory by introducing (or importing) a new causal mechanism, questioning the validity or utility of an existing one, articulating similarities or differences between causal mechanisms or synthesizing multiple causal mechanisms to examine mediating or moderating effects. In our case, these causal mechanisms are key to understanding how institutional dimensions collectively shape entrepreneurial outcomes.

Among the papers that introduce (or import) a new causal mechanism, Cheng and Yu (2008) explain how institutional dimensions trigger proactive and radical international responses that lead SMEs to initiate and intensify internationalization. Franczak et al. (2023) demonstrate how institutional dimensions shape new venture survival in emerging markets through entrepreneurs' perceptions of uncertainty and their behavioural responses. Applying explainable artificial intelligence, Graham and Bonner (2024) focus on the non-linearity in the relationship between institutional dimensions and entrepreneurship, as well as the heterogeneity in the importance of individual dimensions, highlighting an overall trend towards the dominance of the cultural-cognitive dimension.

We identified papers that contribute by examining and proposing new mediation and moderation relationships between institutional dimensions and constructs influencing entrepreneurial activity. The interrelation between institutional dimensions is significant in determining entrepreneurship (Szyliowicz & Galvin, 2010) and business exit (Beynon et al., 2021).

For example, Beynon et al. (2021) show that in countries lacking supportive entrepreneurial framework conditions (such as financing for entrepreneurs, government support and policies, taxes and bureaucracy and governmental programmes, all related to the regulative dimension), individuals are more likely to perceive themselves as having stronger entrepreneurial abilities and lower fear of failure (cultural-cognitive), making overconfidence more likely, increasing entrepreneurship. On the other hand, countries with high entrepreneurial framework conditions perceive themselves as having fewer (absent high cultural-cognitive) entrepreneurial abilities and are more likely to experience fear of failure, decreasing entrepreneurial activity.

Lang et al. (2014) explained that in rural communities, the prevailing normative dimension offers

distinct motivations for local entrepreneurs in how they navigate regulatory restrictions. The entrepreneur's cultural-cognitive dimension, influenced by the specific characteristics of their context, enhances the potential of the normative dimension. Additionally, the cultural-cognitive dimension plays a moderating role, mitigating the restrictive impact of regulatory institutions; in both cases, those interactions lead to an increase in entrepreneurial practices.

Lopez et al. (2025) show that institutional dimensions interact to shape high-impact female entrepreneurship across different contexts, while Li et al., (2020a, b) emphasize that this relationship is especially important in explaining female entrepreneurial activity rates in low-development countries. Huang et al. (2023) further explain how institutional dimensions influence college students' entrepreneurial willingness.

Moreover, the importance of considering the regulative dimension concerning the other two dimensions to explain entrepreneurship has been highlighted in the literature (Lang et al., 2014; Steinz et al., 2016). For example, Eesley et al. (2016) showed how a project (regulative dimension) implemented by universities to support entrepreneurs affects their individual beliefs (cultural-cognitive dimension) and behaviour, increasing high-tech entrepreneurship; however, the performance of their new ventures was not as expected because the programme did not consider the broader regional institutional context. This result highlights the interplay between the regulative dimension influencing the cultural-cognitive dimension, underscoring the importance of considering the cultural context, the perception of entrepreneurship in the country and the significance of networks and role models (normative dimension) in overcoming challenges faced by new ventures. Wahga et al. (2018) find that in Pakistan's leather industry, weak formal regulatory pressure is offset by strong normative pressures from intermediary organizations and by cognitive-cultural dimensions, such as entrepreneurs' values and perceived competitive gains. The interaction between these institutional dimensions increases perceptions of opportunities. Stephan et al. (2015) arrive at similar results, showing that social entrepreneurship is higher when institutional dimensions collectively create a supportive environment. De Clercq (2010) examined the association between institutional dimensions and new business development in emerging economies.

Finally, Camelo-Ordaz et al. (2020) evaluated these interactions and found that entrepreneurship opportunity recognition is strongly influenced by the cultural-cognitive dimension (entrepreneurs' trust and belief in their own abilities). Moreover, if the institutional context is supportive of entrepreneurial actions, given high economic freedom (favourable regulative dimension) and a performance-based culture (favourable normative dimension), the effect of the cultural-cognitive dimension in opportunity recognition will be stronger. In consequence, we propose that the institutional dimensions operate in constant interaction, and it is crucial to understand how these interactions influence entrepreneurial activity. Therefore, we suggest the following propositions:

Proposition 4a: An unfavourable regulative dimension (weak government support and policies), in interaction with strong normative (entrepreneurs receive high status, is considered a desirable career choice, and successful entrepreneurs receive media attention) and cultural-cognitive (good perceptions of entrepreneurial attributes) dimensions, increases entrepreneurs' overconfidence, leading to higher exit rates in developing countries.

Proposition 4b: Favourable regulative (high economic freedom) and normative dimensions (a society that encourages and rewards entrepreneurial activity) in interaction with favourable cultural-cognitive dimensions (knowledge and skills perceptions) lead to higher entrepreneurial opportunity perceptions and entrepreneurial activity.

5.4 Constructs and variables

Conceptual constructs and variables are essential components of any theory, serving as the lever that defines what is being theorized (Makadok et al., 2018). They can be introduced, imported, questioned, removed, redefined, clarified, broadened or narrowed.

Different authors emphasized the importance of favourable institutional dimensions by considering subfields and emerging topics within entrepreneurship research. One prior theoretical paper introduced a novel framework by unifying the institutional logic and the institutional dimensions approach (Sine et al., 2022). Nevertheless, there is no consensus on the

measurements of institutional dimensions, and different indicators are implemented depending on the subfield.

Busenitz et al. (2000) were the first researchers that introduced and validated the construct of a country institutional profile for entrepreneurship, consisting of regulatory, cognitive and normative dimensions. Later, Manolova et al. (2008) introduced and validated this construct across emerging economies.

We also find that by using *constructs and variables*, some authors have introduced new outcomes into the analysis, such as entrepreneurial exit (Beynon et al., 2021), exit intentions in the context of transition economies (Widz & Kammerlander, 2022) and the profile of entrepreneurs who start again after failure, showing how institutional dimensions shape this profile (Espinoza-Benavides & Diaz, 2019). Handrito et al. (2023) introduced the long-term orientation concept as an essential strategic option for new firms to shape their future success. They analysed the relationship between the entrepreneur's inner personality and institutional dimensions as antecedents of long-term orientation. However, most of the articles we classified in this category operationalized the institutional dimensions, which differ from most literature.

These articles propose a different perspective on the operationalization of institutional dimensions, sometimes considering constructs from other theories. For instance, some authors introduce the conducive dimension and its measurement to analyse high-impact entrepreneurship (Stenholm et al., 2013). Other authors reinterpret institutional dimensions (regulative, normative and cultural-cognitive) and develop a framework for the growth orientation of city entrepreneurial ecosystems, which includes three institutional dimensions: regulatory, cultural values and socio-cultural practices (Audretsch et al., 2025).

They also included a new mediator (vision for women's entrepreneurship) and measures to explain the relationship between the institutional dimensions and women's entrepreneurship from both a quantitative (Yousafzai et al., 2015) and qualitative perspective (Xie et al., 2021). Other authors presented new ways to explain how institutional dimensions are moderators to explain outcomes such as entrepreneurial orientation and internationalization (Li, 2018; Wales et al., 2021), while others considered just one of the dimensions as a focal phenomenon, such as the regulative dimension, to explain the internationalization of new technology firms (Coeurderoy &

Murray, 2008), or the cultural-cognitive dimension, to explain entrepreneurship across countries (Knorr et al., 2013). Thus, we propose the following propositions:

Proposition 5a: The operationalization of institutional dimensions can be enriched by introducing new outcomes (such as entrepreneurial exit or long-term orientation) leading to a more comprehensive understanding of their influence on the entrepreneurship phenomenon.

Proposition 5b: The measure of institutional dimensions can be enriched by introducing new mediators (such as the vision for women's entrepreneurship) and using the dimensions as moderators to explain entrepreneurial orientation and internationalization, leading to a more comprehensive understanding of their influence on the entrepreneurship phenomenon.

5.5 Boundary conditions

No theory can be applied universally without limitation. Each operates within specific boundaries, beyond which its conclusions may lose validity or fail. Boundary conditions determine when the theory is applicable and when it is not (Makadok et al., 2018).

We observed the lack of critical work that contrasts or discusses the consistency of the institutional dimensions approach among authors who increased the limit of the *boundary conditions* of the theory. As mentioned in the contributions regarding constructs and variables, our analysis identified an adaptation of the definitions for institutional dimensions, which allowed the researchers to adjust and apply them to different sectors and phenomena within the field. For example, studies have examined inconsistencies in a country's institutional context and the context inside universities that influence university entrepreneurship (Eesley et al., 2016); the role and influence of institutional dimensions on the internationalization of entrepreneurship (Mogos et al., 2011); and contexts characterized by informal economies and tax avoidance (Mickiewicz et al., 2019). In contrast, we did not identify any research that made an explicit call to restrict the theory or the definitions. This allowed the authors, according to their interests, to broaden their opportunities to adapt the theory to specific sectors and units of analysis. Specifically, the studies in

this category showed how the institutional dimensions approach aids in understanding the picture of entrepreneurship phenomena at different levels and in different contexts. For example, these articles clarify the boundary conditions by specifying when and under what conditions institutional dimensions matter. Spencer and Gomez (2004) examine how institutional dimensions and economic factors influence types of entrepreneurship, while Lim et al. (2016) demonstrate that individual-level effects on entrepreneurial engagement depend on institutional contexts. Other articles highlight how institutional dimensions support different stages of entrepreneurship (Alvarez et al., 2025) and innovative entrepreneurial activity (Arabiyat et al., 2019) or shape the effectiveness of causal and effectual entrepreneurial logics (Shirokova et al., 2021). Kara et al. (2024) analyse variations between developed and developing countries, and Bernal et al. (2022) show that entrepreneurs' responsiveness depends on venture stage and the intensity of institutional pressures, and Althalathini and Tlaiss (2023) demonstrate that the emancipatory potential of digital technologies for women entrepreneurs is contingent on specific institutional dimensions, while Tlaiss (2019) challenges views of career success by showing how its meaning is shaped by normative and cultural-cognitive dimensions.

A key insight is that the influence of regulative and normative dimensions may differ significantly depending on whether entrepreneurship occurs in developed or developing countries (Mickiewicz et al., 2019), as well as within formal or informal sectors. In environments where the regulative dimension exerts strong control, entrepreneurs may gravitate towards the informal economy if institutions become overly restrictive (Webb et al., 2009). Conversely, in more supportive environments, these same dimensions may enhance formal or productive entrepreneurship (Stenholm et al., 2013). In short, the effect of institutional dimensions on entrepreneurship is not universal but is shaped by the surrounding context, including the degree of informality.

Therefore, we put forward the following proposition:

Proposition 6: Regulative and normative dimensions are specific according to the context in which they operate. When informal economies are considered, the relationship between insti-

tutional dimensions and entrepreneurship could be counterintuitive. For instance, scarce regulations supporting entrepreneurship and a negative stereotype of the entrepreneur inhibit entrepreneurship.

Figure 3 illustrates the general model with the six previous propositions.

5.6 Outputs

Finally, we found that most of the contributions to the literature analysing entrepreneurship through the lens of institutional dimensions are related to the *outputs*, as shown at the bottom of Fig. 2. This indicates how contributions to the theory can progress as theories develop over time; when an approach is new, researchers try to derive some initial outcomes from it. For example, Busenitz et al. (2000) applied the institutional dimensions approach to entrepreneurship, which was an essential contribution in this field, mainly because of the novel application, as other researchers began exploring the opportunities to contribute by deriving additional outputs from the existing theory. Recently, research in this classification has started to combine the institutional dimensions approach with other theoretical frameworks or approaches to improve the analysis. Some of those applications are also innovative, such as the combinations with resource-based theory (Mohsen et al., 2021), theory of planned behaviour (Bağış et al., 2023; García-Rodríguez et al., 2022; Ghazali et al., 2021) and embedded agency perspective (Rieger et al., 2021).

As seen in the earlier results, there is some consensus regarding the influence of the regulative, normative and cultural-cognitive dimensions on different types of entrepreneurship. Subsequently, in the thematic analysis, we focus on elucidating the evolutionary trajectories of research within each of the dimensions and their specific outcomes.

5.6.1 Regulative dimension

Some studies do not support the use of the regulative dimension to explain entrepreneurial activity (Schillo et al., 2016; Valdez & Richardson, 2013). This weak relationship can be explained by the types of variables with which the authors operationalize

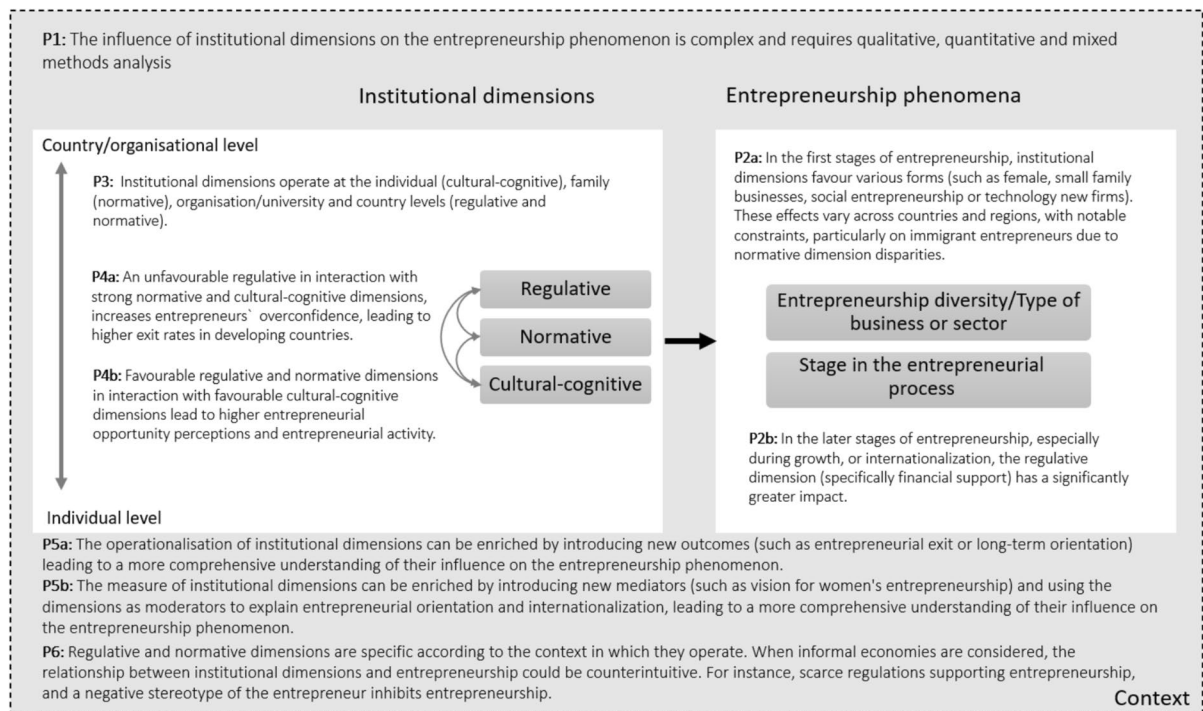


Fig. 3 Proposed model to analyse the relationship between institutional dimensions and entrepreneurship phenomena (Propositions 1 to 6)

this dimension and the development stage of the venture. For instance, Urbano et al., (2019a) found that meanwhile some regulatory conditions (such as property rights and government programmes) enhance the probability of developing new technology initiatives among new/established firms, other regulations (like support for science and technology) retard this development. In contrast, Coeurderoy and Murray (2008) showed that, in terms of internationalization and the choice of location of new technology firms, entrepreneurs are more influenced by the industry regulations in which the company operates and less influenced by foreign regulations. These findings concur with those of Wang et al. (2017), who showed that the regulative dimension helps new firms to acquire the necessary resources and develop capabilities to exploit opportunities to enter a new market. Bosma et al. (2018) demonstrated that the regulative dimension, when operationalized—such as financial stability and a small government—is the most important predictor of productive entrepreneurship. Sine et al. (2005) showed that the regulative dimension legitimated the electricity sector and provided incentives for entrants,

significantly impacting novel and risky technologies. Agostino et al. (2020) presented similar results where the local institutional quality, referring to the regulative dimension, positively affects entry rates, and its impact is stronger in high-tech industries.

There are different perspectives on the contradictory results of the influence of the regulative dimension on entrepreneurial activity. One is that the regulative dimension may be insufficient because there is little trust that regulations intended to favour entrepreneurship will remain stable over time (García-Cabrera et al., 2018), which is also connected with poor entrepreneurship policies (Arshed et al., 2014), such as protecting intellectual rights (Yu et al., 2013). Other problems have been identified in bureaucratic licensing processes within the government and unclear regulatory frameworks in some sectors, such as new technologies (Effah 2016). To deal with this lack of regulation, some entrepreneurs seek to create strategic relationships (Steinz et al., 2016) with people of authority or form alliances with large and established firms (Yu et al., 2013). However, in other aspects, such as access to financing (Díez-Martín et al. (2016), the regulative dimension

(government policies that support entrepreneurs) has a more positive and significant influence than the normative and cultural-cognitive dimensions. Moreover, Moro et al. (2018) found that the regulative dimension within banks affects entrepreneurs' credit possibilities. Informal relationships to overcome problems in the regulative dimension and sector-specificities are part of the culture and perception of opportunities in the environment. For instance, Maaßen et al. (2025) show that a supportive normative dimension can compensate for the absence of a favourable regulative dimension in the context of sustainable entrepreneurial activity. We thus found empirical evidence that shows the importance of analysing the regulative dimension interrelated with the normative one, as presented in Proposition 4. Therefore, the following propositions are put forward:

Proposition 7a: Improvement on the regulative dimension (such as clear property rights, small government, regulation of credit, labour and business markets, financial stability and government support) increases the opportunities for high-tech, innovative, green and digital entrepreneurship. To some extent, scarce support of the regulative dimension is compensated for with a highly supportive normative dimension.

Proposition 7b: The regulative dimension (such as the number of procedures and days to start a business, intellectual property protection and public trust in politicians) highly influences the more consolidated new firms and financing of entrepreneurship.

5.6.2 Normative dimension

Prior research suggests the importance of the normative dimension in explaining entrepreneurship in the hospitality sector (Li et al., 2020a, b) and students' entrepreneurial intention (Ofstedal et al., 2018). The normative dimension influences entrepreneurial activity depending on the social perceptions associated with entrepreneurship in each context. In addition, literature highlights the importance of the culture that supports entrepreneurship in different countries, over the regulative dimension tied to formal regulations that favour entrepreneurship.

On the other hand, we find a very particular relationship in studies that examine the connection

between entrepreneurial intention and the normative dimension. Prior studies have shown that the normative dimension is very important in enhancing entrepreneurial intentions among students (Ofstedal et al., 2018). It is worth noting that, while existing studies on entrepreneurial intention provide a basis for latent entrepreneurship, there is a notable absence of research exploring the influence of institutional dimensions on this stage. Recent research emphasizes a predominant emphasis by local and national governments on promoting overall entrepreneurial activity (Agostino et al., 2020), potentially neglecting the importance of intentions and latent entrepreneurship. Nevertheless, entrepreneurial intentions play a crucial role, as they signify the initial steps towards nascent entrepreneurs. Accordingly, Valdez and Richardson (2013) suggested that if people believe their society has a favourable view of entrepreneurs, many people will want to participate in entrepreneurship initiatives. Cultural differences, such as beliefs and values, might therefore play a more important role in entrepreneurship than economic and regulative aspects, such as transaction costs, especially in opportunity-based entrepreneurship in the initial entrepreneurial stages. He et al. (2020) argued that the normative dimension, related to R&D transfer and open culture, promotes the influence of opportunity-based entrepreneurship on the environmental quality of sustainable development. They indicated that opportunity-based entrepreneurs try to identify new opportunities according to the values and common rules (normative dimension) to improve their entrepreneurial capabilities by building advantages for themselves. Finally, Demirdag and Eraydin (2022) produced similar results and noted the significant role of normative institutions (such as an innovative society, a good perception of production/trade and knowledge transfer) in defining different regional innovative entrepreneurship pathways in an emerging economy. Therefore, we point out the following propositions:

Proposition 8a: The normative dimension has a stronger influence on entrepreneurs motivated by opportunity than on entrepreneurs motivated by necessity. Particularly, where societal perceptions play a crucial role, the normative

dimension is more important than the regulative dimension.

Proposition 8b: The stronger the normative dimension (favourable view of entrepreneurs, knowledge transfer, open culture) in a society, the greater the entrepreneurial intentions and the possibility that nascent entrepreneurs will emerge.

5.6.3 Cultural-cognitive dimension

Companys and McMullen (2007) showed that entrepreneurial opportunities, from the cultural-cognitive dimension perspective, exist because of the environment's ambiguity and the resources available for an individual to interpret and redefine those opportunities. Moreover, the importance of the cultural-cognitive dimension has been recognized in studies related to the internationalization of new firms. García-Cabrera et al. (2016) recognize an entrepreneur's discretion or autonomy in decision-making, which explains why some entrepreneurs in the same institutional environment decide to internationalize their firms while others do not. Chowdhury et al. (2019) found that improvement in institutions has a more significant effect on entrepreneurship in developing economies than in developed economies. This result is related to the cultural-cognitive dimension, which, in turn, is associated with the individual. In emerging economies, most new ventures are motivated by necessity. Therefore, self-confidence and a favourable perception of oneself regarding the skills needed to start a new venture and succeed are essential. Similarly, Bosma et al. (2018) found that the cultural-cognitive dimension concerning perceived start-up skills and a culture of entrepreneurship that nurtures awareness is conducive to entrepreneurial activity. In the same way, García-Cabrera et al. (2018) showed that the cultural-cognitive institutions related to business experience are most responsible for the emergence of different types of entrepreneurial motivation. To explain other types of entrepreneurs, the cultural-cognitive dimension also appears critical when explaining opportunity entrepreneurship, as shown by the role that this dimension plays in entrepreneurial behaviour compared to the other two dimensions (Díez-Martín et al., (2016); García-Cabrera et al., (2016). Various authors have therefore focused on how this dimension operates in entrepreneurship

through concepts such as independence, risk-taking and creativity (Knorr et al., 2013). Sine et al. (2005) stated that the development of cultural-cognitive institutions influences new firms more than the other two dimensions; they indicated that their goals and experience shape the type of technology entrepreneurs choose. Johansson et al. (2021) found similar results for the venture capitalist sector, arguing that while the normative and regulative dimensions influence investment decisions, the cultural-cognitive dimension dominates the final behaviour. In their qualitative study, the cultural-cognitive dimension is related to the individual (1) subjective evaluation of the market, product and production potentials; (2) subjective definitions of entrepreneurs' and key people's characteristics; and (3) subjective expectations of future financial performance (in comparison to industry performance). A study on different contexts (Dickson & Weaver, 2008) found evidence that the cultural-cognitive dimension, measured as (1) the perception of the general risk and uncertainty in the environment and (2) the perception of attractiveness and the good opportunities of the industry and the environment, influences a firm's entrepreneurial orientation (firm actions that are more innovative, risk-taking and proactive), considering industries of different technological levels and sizes. Finally, a study on the context of entrepreneurial orientation (Wang et al., 2017) found that the performance of a new venture is more positive when the cognitive dimension is stronger. Therefore, the following propositions are suggested:

Proposition 9a: The cultural-cognitive dimension (such as skills and knowledge perception, experience and expectations on financial performance) interacts with the regulative and normative dimensions to shape entrepreneurial activity and investment decisions. This interaction is crucial in contexts with weak or ambiguous formal support.

Proposition 9b: The cultural-cognitive dimension (such as the perception of risk and uncertainty, and the perception of the industry or market opportunities) significantly influences the firm's entrepreneurial orientation and the creation of new businesses, particularly in the first stages, such as the opportunity recognition stage.

Figure 4 illustrates the specific outcome propositions for studying the relationships between

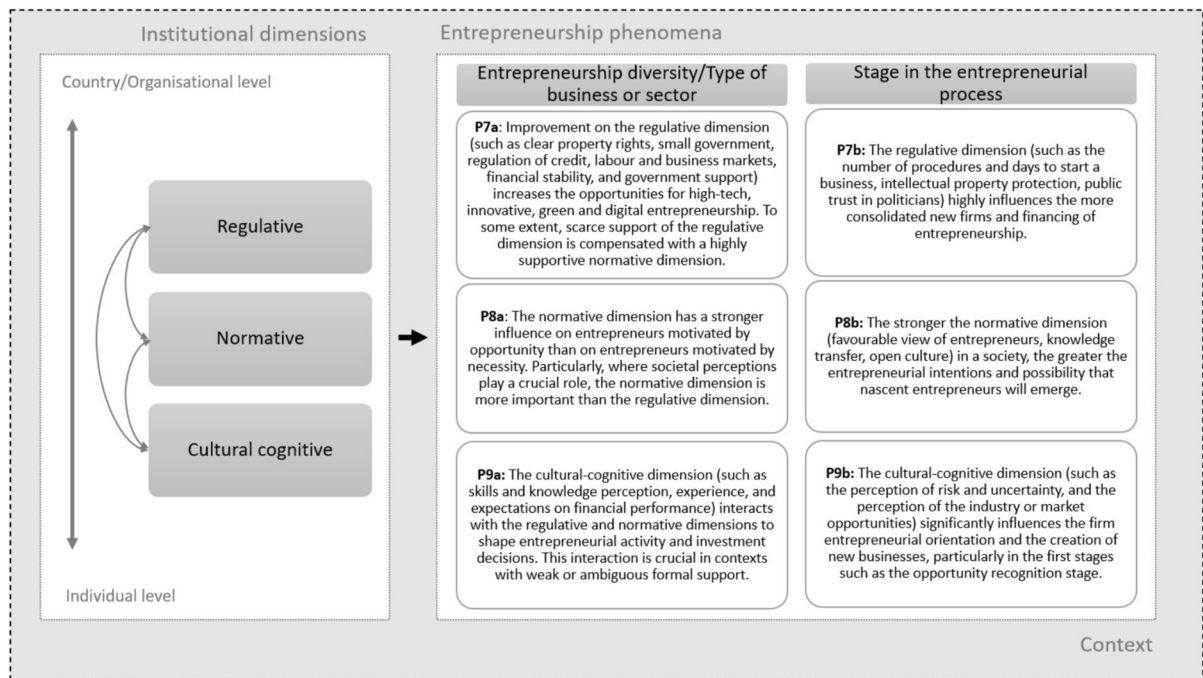


Fig. 4 Proposed model to analyse the relationship between institutional dimensions and entrepreneurship phenomena (Propositions 7 to 9)

institutional dimensions and entrepreneurial activity.

6 Discussion and conclusions

Through a rigorous systematic analysis of 84 articles published in Q1 journals included in the Journal Citation Reports™ for the period 2000–2025, this review enhances our understanding of entrepreneurship research that uses institutional dimensions (regulative, normative and cultural-cognitive) as a conceptual framework extending beyond the traditional examination of formal and informal institutions. The main findings could be helpful for further methodological and thematic research that constructively contributes to the development of entrepreneurship research from this approach.

Regarding the methodological aspect, the main results identified the problems encountered in measuring the dimensions, because different papers have contributed from their perspective by applying the institutional dimensions to specific cases and units of

analysis. The variables used to operationalize institutional dimensions differ across works, and there is no consensus on the appropriate measurements. For example, while the scale allows the regulative dimension to be observed through individual perceptions, it risks blurring the line between objectively grounded formal rules and subjective interpretations. Although studies building on Busenitz et al. (2000) have made substantial progress in collecting primary data on institutional dimensions, these approaches still warrant careful consideration. One promising strategy involves combining perception-based measures with objective indicators to achieve a more reliable and comprehensive assessment of institutional contexts. Similarly, we found possibilities of improvement on the measurement of the cultural-cognitive dimension given that, in some research, it is a variable only of individual perception of skills and self-confidence. However, this dimension not only reflects personal assessments but also arises from the social construction of beliefs. This interplay complicates the boundaries of measurement and poses challenges for operationalizing the institutional dimensions. These challenges can be addressed

through methodological refinements, such as employing multilevel modelling techniques.

The measurement methods depend on each author and their research interests. Generally, there is a need to include a broader range of institutional variables and measures (Dickson & Weaver, 2008). Although the same databases, such as the GEM, were used in many publications, some authors revealed the existence of problems in these databases (Schillo et al., 2016; Stenholm et al., 2013; Urbano & Alvarez, 2014; Valdez & Richardson, 2013; Yousafzai et al., 2015). Data sources are limited, particularly when attempting to conduct cross-country comparisons, because of the limited number of indicators and the differences in measurement across countries (Schillo et al., 2016). Additionally, future studies should consider the levels of analysis—national, regional, organizational and individual—as institutional dimensions may vary in relevance and impact depending on the level studied (Appendix 3 provides a summary of the key proxies and the levels of analysis used to measure institutional dimensions). Moreover, for example, at the individual level, the cultural-cognitive dimensions, such as perceived entrepreneurial skills, exhibit greater variation compared to aggregated controls for regulative aspects, which are often observed at the national level. This variation reflects the nested structure of the data frequently used in studies, such as GEM-based research. However, when data are aggregated at regional or national levels, this variation is diminished, potentially amplifying the role of regulative dimensions. This highlights the need for future research to account for the level of analysis when interpreting institutional influences on entrepreneurship (Davidsson & Wiklund, 2001).

We encourage researchers to adopt specific measurements based on their subfield, as this practice is gaining acceptance and yielding interesting results in areas like social entrepreneurship, corporate entrepreneurship and high-tech entrepreneurship (i.e. Ghazali et al., 2021; Handrito et al., 2023). Incorporating these applications and conducting primary data collection can enhance the quality and practical implications of their findings. Furthermore, our findings indicate a shift in research focus from viewing institutional dimensions solely as antecedents of entrepreneurship. Increasingly, these dimensions are recognized as influential factors that impact various outcomes, including entrepreneurship quality and

survival. As a result, new measurements have been employed, demonstrating the promising potential of this research line.

Regarding study types, most articles were empirical, and quantitative research characterizes the field. However, there is scope for improvement in the techniques used. Only six articles presented panel data as an analysis technique despite several researchers stressing the need for more longitudinal research in this field using both quantitative and qualitative methods (Lang et al., 2014). Larger sample sizes are also needed. However, researchers should be careful in these analyses and recognize the problems with establishing a common institutional environment that serves to generalize the results (Busenitz et al., 2000; Gomez-Haro et al., 2011). The use of longitudinal data in aspects such as the evaluation of the impact of policies (regulative institutions) that seek to benefit entrepreneurship is important because of the contradictory results found in the literature. These measurements must therefore consider specific aspects, and this challenge could be overcome by continuing to construct databases to support the measures of specific institutional dimensions. Quantitative results showed that 40% of empirical studies used primary data for their analysis, so there is a need for long-term projects and endeavours to ensure that these efforts to collect first-hand data are not lost.

On the other hand, adopting techniques that differentiate between the levels of institutional dimensions is essential to improve the quality of conclusions and results because each dimension responds to a different level of analysis. As previously highlighted, “the institutional environment is multifaceted” (Yiu & Makino, 2002). While the regulative dimension is related to the rules or norms that affect the entrepreneurship policy of a whole country or a city, the cultural-cognitive dimension captures shared belief systems and interpretive frameworks and illustrates how they influence individual entrepreneurs’ decision-making. Although much of the entrepreneurship literature grounded in institutional theory has focused on macro-level factors, the underlying mechanisms guiding entrepreneurs’ choices remain understudied (Stenholm et al., 2013). Incorporating the cultural-cognitive dimension helps address this gap by examining the interplay between collective understandings and individual actions. This study demonstrated that the academic community cares about this issue, as 15% of the research published

between 2018 and 2023 was based on multilevel analysis, but it is still scarce compared to all research in the field. The measures at the individual level to operationalize the cultural-cognitive dimension also do not follow a clear path. Moreover, the use of the hierarchical approach is urgent, as the cultural-cognitive dimension is the most important variable in explaining different types of entrepreneurship (Garcia-Cabrera et al., 2018; Sine et al., 2005).

More quantitative and qualitative studies are needed. In particular, qualitative research would help to overcome the difficulties concerning a few vague and unmeasurable institutional dimensions (Wang et al., 2014). Combining qualitative and quantitative techniques within the same project offers a more comprehensive understanding by triangulating data, analysing context-specific cases with diverse informants such as entrepreneurs and experts and employing structured tools to ensure systematic and rigorous analysis. Similar results have been found in articles on methods in general entrepreneurship research (Molina-Azorin et al., 2012), and this logic can be applied in a specific field through the institutional approach. As noted by McDonald et al. (2015), the discussion should focus on research design and make criticisms that guide what the appropriate and particular approaches are for solving the problems within the field. Having a critical vision that questions and does not take anything for granted is a topic that has been discussed in entrepreneurship research in general (Blackburn & Kovalainen, 2009).

Regarding the thematic aspects, one of the critical challenges facing future research is the interaction between institutional dimensions. Researchers have advanced explanations of entrepreneurship, considering each dimension, and have emphasized different aspects of the regulative (Coeurderoy & Murray, 2008), normative (Tlaiss, 2019) and cultural-cognitive institutional dimensions (Knorr et al., 2013). However, much needs to be understood about how institutions function and interact with each other and how regulatory institutions, such as laws, can be incentivized and interpreted in various ways, depending on the environment and the relationship with the other two dimensions (Scott, 1995). Some authors have found that the regulative dimension may hinder the generation of new ventures (Valdez & Richardson, 2013)—not only entrepreneurship rates but also the type of new companies created (Sine et al.,

2005). This can be explained by how the policy is formulated and how individuals respond (Arshed et al., 2014). Such results suggest, as in prior research, that interactions between institutional dimensions could be analysed in depth (Valdez & Richardson, 2013; Wang & Chugh, 2014).

Another thematic aspect to consider in future research is the importance of detailed studies, as this allows for conclusive results. The key features to be considered are classified as follows. The first aspect is the country or regional level of development in which the research is carried out (Díez-Martín et al., 2016). Recent research has found that in less developed economies, heavy entry-regulation factors, such as corruption, aggravate the ineffective regulative dimension (Dejardin & Laurent, 2024). Authors should also explore the role of institutional “micro-climates” within countries, which help explain within-country variance (Stenholm et al., 2013). The second aspect is the economic sector. In the most recent publications, concern is expressed regarding studies focused on the effect of institutions in specific sectors, such as sustainable entrepreneurship (Gasbarro et al., 2018; Maaßen et al., 2025). Despite these efforts, studies must carefully analyse institutional dimensions in new businesses from the perspective of other sectors and the specific characteristics of new firms (Dickson & Weaver, 2008), because the institutional dimensions that can be considered advantageous in one sector may be disadvantageous in another. Finally, the third aspect relates to the type and level of entrepreneurship. It is important to develop research that differentiates between necessity- and opportunity-driven entrepreneurship (Knorr et al., 2013) and corporate entrepreneurship (Gómez-Haro et al., 2011). This differentiation might help to develop entrepreneurial policies and strategies according to the needs of each country. When considering different types of entrepreneurs, such as necessity- and opportunity-driven entrepreneurs or those with high-growth aspirations (Estrin et al., 2013), it is important to note that institutional dimensions influence them differently. While GEM data is widely used in studies distinguishing necessity and opportunity entrepreneurship, it cannot differentiate between formal and informal ventures, limiting its scope. Future research should address this gap by using alternative data sources to better capture these distinctions, particularly in developing

contexts where informal ventures are more prevalent and shaped by unique institutional dynamics.

Articles adopting thematic analysis have revealed an interesting finding. There has been greater interest in elaborating on the regulatory dimension, but the conclusions presented about the other two institutional dimensions are imbalanced. Although the literature highlights all three dimensions as critical for understanding the complexity of the institutional context that shapes entrepreneurship (Alvarez et al., 2025; Díez-Martín et al., 2016), this raises some questions: Does this situation occur due to a particular interest in policy formulation? Why has there been varying progress in the publication of results on the normative and cultural-cognitive dimensions, despite their importance in understanding the context shaping entrepreneurial activity? One of the answers to these questions is the difficulty of measuring these dimensions. Much more information regarding regulations exists compared to that available for normative and cultural-cognitive dimensions, and research on these latter two dimensions also takes more time and resources.

In sum, to address the challenges for future research, there must be continuity in this work. Table 1 presents the future research agenda and the main challenges to address in each case, considering the article's theoretical contribution to the field of entrepreneurship and what remains to be done. Furthermore, to build high-quality, focused and aligned research, it is necessary to build research teams with a broad vision that can manage complementary research techniques to respond to some of the aspects previously discussed in the primary literature and proposed in this study. Finally, these aspects are important not only for researchers to contribute to the discipline but also for policymakers. To ensure effective policy intervention, it is important to clearly

define the objectives and characteristics of the population served. The current development of these analyses could distinguish strategies that promote successful entrepreneurship and avoid contrary effects.

Despite its contributions, this paper also has several limitations. This systematic literature review only analysed the literature published in high-quality journals with blind reviewers. Although this guaranteed the quality of the research analysed, some studies could probably meet the conditions for inclusion in the analysis at a theoretical level but were published in journals that are not included in the Journal Citations Report. Future studies should consider having those journals explore other papers or grey literature and find differences between the results and the academic conversations between the different research groups. Another limitation is that we apply the institutional approach to the entrepreneurship domain. However, future research could explore how insights from this approach influence and contribute to other academic fields, as highlighted by Thurik et al. (2024).

We read all of the documents and classified them following the rules described in the methodology; however, despite these systematic rules, the authors' interpretation was present in the classification of the contribution of the papers. Other techniques or types of literature reviews should be considered to analyse the content of the articles reviewed, such as historical review or content analysis through data analytics tools. Considering the increasing number of studies that employ quantitative techniques, the next step in the analysis would be to propose a meta-analysis. Nonetheless, we think that research in the field should continue to advance this technique, given the heterogeneity in current studies. For this reason, this study categorized the research's primary results, and it is a helpful guide that academics should review to understand the field and implement to advance constructively.

Table 1 Future research agenda

Theory main contribution	What has been done	What remains to be done/research questions to explore	Examples of good practices from the literature review	Recommendations/challenges to overcome
Modes of theorizing	Proved the direct relationship between institutional dimensions and entrepreneurial activity	How do we foster favourable institutional dimensions for the development of entrepreneurship?	Arshed et al. (2014) discussed how the process of policy formulation is dominated by powerful actors who govern the process with their interests. They proposed that institutional entrepreneurs shape the process, emphasising legitimacy rather than the effectiveness of the formulation of entrepreneurship policy	Quasi-experimental analysis: Develop a structured research design that mimics experimental conditions as closely as possible Action research: develop and implement interventions or actions in real-world settings. For this, better links between academics and policymakers are needed (Organize forums, workshops, or seminars where academics and policymakers can interact, exchange ideas, and collaborate in research)
Modes of theorizing	Analysed institutional dimensions as antecedents of the creation of different types of entrepreneurship	Do institutional dimensions influence the survival or performance of new ventures? Do institutional dimensions influence the survival of the new ventures specific to each sector?	Beynon et al. (2020) examined how different combinations of regulatory, normative, and cultural-cognitive institutional conditions lead to variations in business exit rates at the country level	Capture key performance indicators and relevant metrics at regular intervals, to facilitate an in-depth analysis of the sustained viability and survival of the new ventures over an extended period. Utilize methodologies such as consistent tracking, periodic surveys, and ongoing monitoring to ensure a thorough examination of their trajectory and resilience over time
Level of analysis and phenomena	Analysed aspects of the ecosystem	Analyse the entrepreneurial ecosystem jointly in light of the institutional dimensions, understanding the actors (government, university and industry) as players and the institutional dimensions as game rules	Agostino et al. (2020) included the interaction of the regulatory dimension and the level of technology in the industry to analyse new business formation	Develop structured surveys or questionnaires to gather primary data from key stakeholders within the entrepreneurial ecosystem. These stakeholders may include government officials, university representatives, industry leaders, entrepreneurs, and support organizations. Consider that different regulative, normative, and cultural-cognitive dimensions influence each stakeholder

Table 1 (continued)

Theory main contribution	What has been done	What remains to be done/research questions to explore	Examples of good practices from the literature review	Recommendations/challenges to overcome
Level of analysis and phenomena	Compared different contexts, considering available and non-specific proxies	Extend the research to different contexts and analyse the particularities of each one	García-Rodríguez et al. (2022) merged the institutional dimensions approach and theory of planned behaviour to generate a model that illustrates the factors influencing parental support for their children's entrepreneurial activities. They measured specific proxies to capture the parents' perceptions of normative and cultural-cognitive dimensions. They also explored the family level, which is usually neglected	Get specific sectorized data, especially from the normative and cultural-cognitive dimensions Conduct an in-depth exploration of normative and cultural-cognitive dimensions by employing a mixed-methods approach. This should include qualitative research methods such as interviews, content analysis, and surveys to capture the nuanced perspectives and entrepreneurial behaviour of individuals and organizations within these dimensions
Causal mechanisms	Analysed the relationship between institutional dimensions and entrepreneurial activity without differentiating the specific sphere or entrepreneurship domain	Which institutional dimension is the most crucial in explaining entrepreneurial activity?	Wu et al. (2020) showed the special importance of the cultural-cognitive dimension in explaining female entrepreneurship	Advance the research by conducting a series of systematic comparative studies across diverse contexts and individuals. By systematically varying key variables and applying rigorous causal inference methods (Instrumental Variable (IV) Analysis, experimental designs, Network Analysis, and Agent-Based Modeling), to uncover and validate patterns of causality. These approaches will provide valuable insights into the generalizability of these patterns across different settings
Causal mechanisms	Proved the direct relationship between institutional dimensions and entrepreneurial activity	What is the causal mechanism that makes dimensions influence entrepreneurial activity?	Camelo-Ordaz et al. (2020) showed that the regulative and normative dimensions moderate the relationship between the cultural-cognitive dimension and entrepreneurial opportunity recognition	Research in the past five years has advanced regarding the interaction of institutional dimensions, but there is not yet a clear line of research to analyse if the institutional dimensions are moderators, mediators, or both to explain entrepreneurial activity
Causal mechanisms	Proved the direct relationship between institutional dimensions and entrepreneurial activity	Are there mechanisms of bidirectional interaction between institutional dimensions and entrepreneurial activity?	Using a qualitative approach, Gasbarro et al. (2018) showed how sustainable entrepreneurs foster changes in the three institutional dimensions through sustainable innovation	Longitudinal qualitative and quantitative research to determine how entrepreneurs could change institutional arrangements; one of the main challenges would be aligning the theoretical framework to the fact that the theory states the difficulty of changing institutions in the short term

Table 1 (continued)

Theory main contribution	What has been done	What remains to be done/research questions to explore	Examples of good practices from the literature review	Recommendations/challenges to overcome
Causal mechanisms	Evaluated different proxies to measure entrepreneurial activity at the same level	Adopt multilevel analysis due to the nature of the institutional dimensions Analyse if there are differences in the research on the aggregation of the cultural-cognitive dimension and the individual perceptions: How does the individual overcome constraints in the institutional environment?	Camelo-Ordaz et al. (2020) measured normative and regulative dimensions at the country level and cultural-cognitive dimension at the individual level to study entrepreneurial opportunity recognition	Build different indicators at the country and individual levels, specifically to measure the cultural-cognitive dimension Building cultural-cognitive indicators at both country and individual levels requires a multidisciplinary approach and a deep understanding of the cultural-cognitive proxies relevant to entrepreneurship in each context. Collaboration with experts in cultural studies, psychology, and entrepreneurship can also be valuable
Constructs and variables	Determined relationship through multivariate analysis	Taking advantage of new methodologies, such as machine learning and big data, to understand the relationship between institutional dimensions and entrepreneurial activity by analysing information that has been obtained through international entrepreneurship projects, such as the Panel Study of Entrepreneurial Dynamics (PSED), Global Entrepreneurship Monitor (GEM) and Global University Entrepreneurial Spirit Student's Survey (GUESSS)	Any research in the subfield that has developed analysis using such tools	Access to big datasets Harmonise different methodologies and databases across years to obtain valuable data Consider using natural language processing techniques to analyse textual data, capturing nuances in language and cultural expressions Implement new techniques that allow real-time or frequent data updates. Utilize machine learning algorithms to identify and adapt to changes in institutional dimensions over time
Constructs and variables	Used different proxies to measure the institutional dimensions, depending on the interests of each researcher	Develop and validate scales to measure institutional dimensions, particularly normative and cultural-cognitive ones	Demiray et al. (2021) analysed the effects of institutional dimensions on entrepreneurs' trust and engagement in crowdfunding, and they adapted the dimensions proposed by Busenitz (2000)	Deepen the understanding of institutional dimensions and the boundaries between them. For example, by analysing real-world case studies that involve entrepreneurial activities within different institutional contexts. This approach allows for a nuanced understanding of how institutions shape and are shaped by entrepreneurs One challenge to overcome is the time and resources to validate new scales
Boundary conditions	Analysed the determinants of entrepreneurial activity from institutional economics theory	Do institutional dimensions complement other theories to better clarify the determinants of entrepreneurship?	Bağış et al. (2023) integrated the institutional dimensions approach with the theory of planned behaviour to explain entrepreneurship intentions and institutions at the country level as moderators	Integration of different theories such as resource-based theory, social capital, theory of planned behaviour, entrepreneurship orientation, embedded agency perspective

Table 1 (continued)

Theory main contribution	What has been done	What remains to be done/research questions to explore	Examples of good practices from the literature review	Recommendations/challenges to overcome
Outputs	Proved the direct relationship between institutional dimensions and entrepreneurial activity	Analyse the role of institutional dimensions in the relationships between entrepreneurs and other stakeholders	Collewaert et al. (2021) explored theoretically how the regulative, normative, and cultural-cognitive institutional dimensions influence business angel investment	Analyse the institutional dimensions to explain other spheres inside entrepreneurship phenomena such as entrepreneurship financing, environmentally sustainable entrepreneurial practices, and their impact on business and society, and the transfer of technology from research institutions to entrepreneurial endeavours
Outputs	The dimensions that positively affect some entrepreneurship may not have the same effect on another type of entrepreneurship	Use analysis to empirically compare the influence of institutional dimensions on different sectors	Sine et al. (2005) showed that the regulative dimension legitimated the electricity sector and provided incentives for entrants, with a more significant effect for novel and risky technologies. They focused on one sector but with differences in the level of application of new technologies	Few studies focused on comparison among sectors: The main challenge is to get comparable data. Some sectors that could be compared (especially in emerging economies) are: Education Technology (EdTech) vs. Traditional Education, E-commerce vs. Traditional Retail, Technology and Innovation vs. Traditional Industries The understanding of how institutional dimensions influence different sectors is crucial for anticipating changes, fostering innovation, and adapting to evolving market dynamics
Outputs	Considered institutional dimensions as factors that explain entrepreneurial activity	Validate within the entrepreneurial ecosystem whether the rules of the game correspond to institutional dimensions or whether other factors should be considered	Steinz et al. (2016) used the logic of entrepreneurship ecosystems to demonstrate the institutional barriers that face foreign cleantech entrepreneurs, which they showed were caused either by the regulations in China or by the difference between Chinese and Western logics	Integration of different theories such as ecosystem and Qualitative research To consider the cultural factor as distinct from the normative dimensions that influence entrepreneurship when examining specific sectors and contexts opens up new avenues for research and enables a more comprehensive understanding of how cultural influences interact with institutional factors to shape entrepreneurial activities and outcomes
Outputs	Identified the institutional dimensions within the university environment	How can knowledge of institutional dimensions be used in the training of entrepreneurs?	Oftedal et al. (2018) integrated the institutional dimensions approach to study the university context; they provided evidence of the importance of institutions present at the university level on entrepreneurial intentions	Integration of different theories, such as the theory of planned behaviour Research needs to further examine the entrepreneurial intentions of students and analyse how the dimensions affect entrepreneurship education in different contexts

Appendix

Appendix 1 List of articles included in the review

Authors (year)	Main objective	Study type/method	Results
Agostino, M., Nifo, A., Trivieri, F., & Vecchione, G. (2020)	Investigates empirically the effects of institutions on new business formation in the Italian provinces over the period 2004–2012	Quantitative/logit, probit, tobit model	In times of crisis, institutional quality loses importance in determining entries, which become more sensitive to the propensity to innovate and to human capital and infrastructural endowments
Althalathini, D., & Tlaiss, H.A. (2023)	Explores how institutional contexts and digital technologies influence women's digital entrepreneurship and emancipation potential in the conflict-laden, Arab country-specific context of Palestine	Qualitative/other	Advances entrepreneurship research by demonstrating how Arab women's digital entrepreneurship unfolds at the intersection between emancipatory enablers and unique, conflict-laden regulatory, normative and cultural-cognitive institutional pillars
Alvarez, C., Lopez, T., & Urbano, D. (2025)	This paper analyses the role of institutional dimensions (regulative, normative and cultural-cognitive) in the entrepreneurial process (potential, nascent and new entrepreneurship)	Quantitative/panel data	Show that (a) regulations regarding new business creation have a stronger influence on new entrepreneurship, (b) social norms have more influence on potential entrepreneurs and individual perceptions regarding their self-capacity and experience to start a new business, and (c) the cultural-cognitive dimension has a stronger influence on nascent entrepreneurship
Amine, L.S., & Staub, K.M. (2009)	Study of women entrepreneurs (WEs) in sub-Saharan Africa by examining factors in the environments in which WEs operate. The goal is to better understand how various environmental barriers impact the efforts of WEs	Theoretical/literature review	Demonstrate that WEs in sub-Saharan Africa face a daunting array of challenges arising from the socio-cultural, economic, legal, political and technological environments in which they live. Recommendations in the paper suggest how to bring about changes in attitudes towards women, work and their independent enterprise
Arabiyat, T.S., Mdanat, M., Haffar, M., Ghoneim, A., & Arabiyat, O. (2019)	Enhance understanding of how various aspects of the national institutional environment impact the scope of innovative entrepreneurial activities across countries	Quantitative/structural equation model	For new innovative enterprises, conductive and regulatory aspects seem to matter most. All conducive factors have a significant and positive impact on entrepreneurial activity rates
Arshed, N., Carter, S., & Mason, C. (2014)	Explore the ineffectiveness of entrepreneurship policy	Qualitative/other	Opening up the 'black box' of enterprise policy formulation, the process is dominated by powerful actors who govern the process with their interests

(continued)

Authors (year)	Main objective	Study type/method	Results
Audretsch, D., Beltiski, M., Eichler, G.M., Mickiewicz, T., & Schwarz, E. (2025)	Perform an empirical analysis of three institutional dimensions: regulatory, cultural values and socio-cultural practices, and test their association with the entrepreneurial ecosystem's growth orientation	Quantitative/logit, probit, tobit model	Framework for the entrepreneurial ecosystem's factors and provide policy recommendations for those interested in supporting the entrepreneurial ecosystem's growth orientation in cities. Among other conclusions, the findings suggest a positive association between the socio-cultural practices of environmental sustainability behaviour in businesses with entrepreneurial ecosystem's growth orientation
Bagis, M., Altinay, L., Kryeziu, L., Kurutkan, M.N., & Karaca, V. (2024)	Examine the effect of institutions on entrepreneurial intentions, the mediation of individual motives in this relationship and the moderating effect of the country	Quantitative/multivariate analysis	Show that normative institutions affect entrepreneurial intentions in Turkey and Kosovo. They also reveal that the personal attitude, subjective norm, perceived behavioural control and need for achievement have a full mediation relationship between regulatory institutions and entrepreneurial intentions and a partial mediation relationship between normative and cultural-cognitive institutions and entrepreneurial intentions
Bernal, P., Domínguez, B., & Montero, J. (2022)	Examine how the venture stage and the intensity of coercive and normative institutional pressures shape entrepreneurs' environmental orientation across countries	Quantitative/multilevel analysis	Indicate that the differences in the environmental orientation in the early and late stages are reduced in countries with high normative pressures and that these differences are not influenced by the intensity of coercive pressures
Beynon, M., Battisti, M., Jones, P., & Pickernell, D. (2021)	Examine how different combinations of regulatory, normative and cultural-cognitive institutional conditions lead to variations in business exit rates across countries at different stages of economic development	Qualitative/fsQCA	Contributes to institutional theory as well as the business exit literature not only by discussing which combinations of institutions determine when exit is beneficial and detrimental to the economy, but also which specific combinations apply across sets of countries
Bjerregaard, T. (2010)	Analyse how institutional logic explains R&D work between SMEs and public university research groups, which means whether normative, regulative or cultural-cognitive institutions influence this relationship	Qualitative/other	Show that many of the collaborating researchers experienced an institutional convergence constituting a shared cultural space for knowledge exchange and communication in their joint projects

(continued)

Authors (year)	Main objective	Study type/method	Results
Bosma, N., Content, J., Sanders, M., & Stam, E. (2018)	Bring together institutions, entrepreneurship and economic growth using a parsimonious growth model	Quantitative/panel data	Show that productive entrepreneurship contributes to economic growth. The set of proxies for institutional quality, financial stability, small government and perceived start-up skills are the most important predictors of such productive entrepreneurship
Busenitz, L.W., Gómez, C., & Spencer, J.W. (2000)	Introduces and validates a measure of country institutional profile for entrepreneurship, consisting of regulatory, cognitive and normative dimensions	Quantitative/structural equation model	Subscales of institutional dimensions applied to the entrepreneurship field, based on data from six countries, show reliability, discriminant validity and external validity
Camelo-Ordaz, C., Diáñez-González, J.P., Franco-Leal, N., & Ruiz-Navarro, J. (2020)	Analyse the influence of entrepreneurial cognition factors (entrepreneurial self-efficacy and outcome expectations) on entrepreneurial opportunity recognition (EOR). We also consider the moderating effect of contextual factors (normative and regulatory dimensions) on the relationship between entrepreneurial factors and EOR	Quantitative/multilevel analysis	The regulatory and normative dimension positively moderates the relationship between self-efficacy and EOR, but the effects of outcome expectations on EOR are not reinforced by any institutional factors
Cheng, H.L., & Yu, C.M.J. (2008)	Investigate how external pressures in the home country drive SMEs to initiate internationalization as a form of institutional change	Quantitative/multiple regression	Suggest that the decision by an SME to initiate its internationalization can be regarded as an institutional change to respond to its external pressures within the home country. The results show that for those SMEs under greater institutional pressures, they are not only tending to expand abroad earlier but also adopting their initial international activities in a more radical style
Chowdhury, F., Audretsch, D.B., & Belitski, M. (2019)	Examine how formal and informal institutional dimensions affect the quality and quantity of entrepreneurship between developed and developing countries	Quantitative/panel data	Demonstrate that institutions are important for both the quality and quantity of entrepreneurship

(continued)

Authors (year)	Main objective	Study type/method	Results
Coeurderoy, R., & Murray, G. (2008)	Analyse the effect of the institutional dimension, specifically the national regulatory environment, on the location choices and the speed of internationalisation by British and German New-technology-based firms	Quantitative/logit, probit, tobit model	Show that managerial experience influences the location choices of NTBFs facing regulatory hazards
Collewaert, V., Filatotchev, I., & Khoury, T.A. (2021)	Explore how the regulative, normative and cultural-cognitive institutional dimensions influence business angel investment and their governance arrangements	Theoretical/literature review	Demonstrate how the extent, frequency and mode of angel engagement with the target venture can be shaped by the institutional environment
Companyys, Y.E., & McMullen, J.S. (2007)	Reviews the strategic management and entrepreneurship literatures to identify the nature and character of entrepreneurial opportunities and the entrepreneurial strategies that firms employ to seize and commercialize these opportunities	Theoretical/literature review	The main results show that entrepreneurial opportunities exist as a result of environmental ambiguity and the cultural resources available to interpret and define these opportunities
Danis, W.M., De Clercq, D., & Petricevic, O. (2011)	Examines how fundamentally different institutional conditions in emerging versus developed economies may clarify variations in the level of new business activity across countries	Quantitative/logit, probit, tobit model	Support the argument that social networks are more important for new business activity in emerging than in developed economies. Furthermore, in emerging economies, the relationship between associational activity and new business activity is stronger for countries with higher regulatory and normative institutional burdens, whereas these moderator effects are absent in developed economies
De Clercq, D., Danis, W.M., & Dakhli, M. (2010)	Examine the effect of associational activity on the level of new business activity in emerging economies, and test the thesis that associational activity becomes more instrumental for new business creation when aspiring entrepreneurs confront higher institutional burdens (i.e. obstacles derived from underdeveloped or absent institutions)	Quantitative/multiple regression	The main results show a positive relationship between a country's associational activity and new business activity; this relationship is stronger for higher regulatory and normative institutional burdens and lower cognitive institutional burdens

(continued)			
Authors (year)	Main objective	Study type/method	Results
Demirdag, I., & Eraydin, A. (2023)	Contribute to understanding how region-specific institutions encourage or inhibit regional innovative entrepreneurship, with a particular focus on the less studied normative and cultural-cognitive institutions	Qualitative/case study	The main results show that some policies are essential for improving the entrepreneurship environment and altering the perception of society regarding entrepreneurship
Díez-Martin, F., Blanco-González, A., & Prado-Román, C. (2016)	Analyse the impact of a country's entrepreneurial legitimacy on its entrepreneurs' access to financing	Quantitative/structural equation model	Suggest that innovation-driven countries with more entrepreneurial legitimacy obtain greater rates of entrepreneurial activity
Eesley, C., Li, J.B., & Yang, D.L. (2016)	Answer how Project 985 affects alumni beliefs regarding innovation, the innovative behaviour of firms they founded and ultimately the performance of these firms	Quantitative/other	The main findings show that graduates of the analysed universities subsequently expressed greater confidence in innovation and founded more high-tech ventures; however, entrepreneurs influenced by the reform were not as financially successful as those who founded firms before the reform or from non-985 universities. This surprising finding as caused by the fact that Project 985 was institutionally inconsistent with China's broader institutional environment
Effah, J. (2016)	Understand how regulative, normative and cognitive institutions affect e-payment entrepreneurship in developing countries	Qualitative/case study	Show that some national and international institutions encouraged the initiative. However, unclear regulations and bureaucratic processes of the Central Bank as well as the entrepreneur's own cognitive failure to consider contextual differences between the developed and the developing world constrained the initiative
Espinoza-Benavides, J., & Díaz, D. (2019)	Examine the profiles of entrepreneurs who failed in previous businesses but, despite their initial failure, decided to start or maintain another business	Quantitative/logit, probit, tobit model	Show that for Chilean entrepreneurs, there is a different profile between those who fail and abandon and those who decide to start a new business after failing. These differences show that post-failure entrepreneurs behave like angel investors, have better business skills and are more experienced

(continued)

Authors (year)	Main objective	Study type/method	Results
Franczak, J., Pidduck, R.J., Lanivich, S.E., & Tang, J.T. (2023)	Unpack the nuanced influences of entrepreneurs' perceived environmental uncertainty and their subsequent entrepreneurial behavioural profiles, and how this particularly bolsters venture survival in contexts with underdeveloped institutions for entrepreneurship	Theoretical/literature review	Entrepreneurs' interpretations of regulatory, cognitive and normative institutional support for private enterprise helps them embrace uncertainties more accurately reflective of on the ground realities and stimulates constructive entrepreneurial behaviours. These are critical for increasing survival prospects in characteristically turbulent, emerging market contexts that typically lack reliable formal resources for cultivating nascent ventures
García-Cabrera, A.M., García-Soto, M.G., & Durán-Herrera, J.J. (2016)	Answer: How does the entrepreneur's perception of the institutional dimensions influence their decision to internationalize, and what role does opportunity motivation play in the impact of those perceptions on the internationalization decision	Quantitative/multiple regression	The individual's perception of the normative and regulative aspects of institutions, the interaction between the two and the interaction between the normative and cognitive aspects of institutions, explain the decision to embark on international operations. Opportunity motivation mediates the impact of the normative aspects of institutions on that decision
García-Cabrera, A.M., Lucía-Casademunt, A.M., & Padilla-Angulo, L. (2020)	Examine how the institutional distance between immigrants' country of residence and country of origin, as well as the regulative and normative aspects of institutions in immigrants' country of residence, social context variables and individual psycho-behavioural factors, condition immigrants' entrepreneurial motivation (i.e. mainly by necessity, by a combination of necessity and opportunity, or mainly by opportunity)	Quantitative/multilevel analysis	The main results show that the distance in the normative aspects of institutions harms entrepreneurial opportunity motivation. At the same time, however, opportunity motivation is likely to benefit from both the normative aspects of institutions that reduce locals' opportunity motivation and the distance in the regulative aspects of institutions
García-Rodríguez, F.J., Gutiérrez-Taño, D., & Ruiz-Rosa, I. (2022)	Present an explanatory model of the factors that determine parental support for possible entrepreneurial initiatives of the parents' children	Quantitative/structural equation model	The main results indicate the important role of entrepreneurship education in enhancing entrepreneurship not only due to the positive direct impact on students' entrepreneurial intentions, but also by changing parents' perceptions regarding the children's capabilities and, therefore, influencing the support for entrepreneurial behaviour

(continued)			
Authors (year)	Main objective	Study type/method	Results
Gasbarro, F., Rizzi, F., & Frey, M. (2018)	Illustrates the relationship between the sustainable institutional entrepreneurial practices and each institutional pillar, including the cultural-cognitive institutions, which have been neglected in previous research	Qualitative/case study	The main results illustrate the relationship between the sustainable institutional entrepreneurial practices and each institutional pillar, including the cultural-cognitive institutions, which have been neglected in previous research
Ghazali, E.M., Mutum, D.S., & Javadi, H.H. (2021)	Presents a framework for integrating distinct perspectives on social entrepreneurship by combining institutional theory with the social entrepreneurship intention model	Quantitative/structural equation model	Indicate that experience moderates the relationships between the regulatory and cognitive environments, cognitive environments and social support and social support and perceived feasibility. Contrary to previous studies, the findings suggest that increasing social work experience isolates entrepreneurs from their environment
Gómez-Haro, S., Aragón-Correa, J.A., & Córdón-Pozo, E. (2011)	Contribute to a better understanding of how various dimensions of a region's institutional environment may impact the level of corporate entrepreneurship among firms	Quantitative/structural equation model	Show that both the normative and cognitive dimension of the institutional environment influence an organisation's entrepreneurial orientation. They also show that regulatory dimension influences what type of corporate entrepreneurial activity is carried out
Graham, B., & Bonner, K. (2024)	Study about the dominance of institutional dimensions, their predictive ability and more complex non-linear relationships	Quantitative/machine learning	Contribute to institutional theory and highlight important areas where machine learning methods can contribute to entrepreneurship research and policy
Handrito, R.P., Slabbinck, H., & Vanderstraeten, J. (2023)	Examines the role of the inner personality of entrepreneurs, implicit need for achievement (nAchievement) and their perception of the institutional context of the SME's long-term orientation (LTO). Introducing a reflective measurement, namely Operant Motive Test (OMT), to measure entrepreneurs' nAchievement in the entrepreneurship domain	Quantitative/multivariate analysis	Support the importance of regulations for SMEs and provide novel insights to the entrepreneurship domain related to the need to consider the entrepreneur's inner personality as a strong antecedent of entrepreneurial behaviour. Long-term orientation (LTO) is an essential strategic option for firms to shape their future success, in particular for SMEs which are often submerged by daily operations. Surprisingly, little is known about the underlying personal and contextual drivers of LTO in an SME context

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Authors (year)	Main objective	Study type/method	Results
He, J.J., Nazari, M., Zhang, Y.Q., & Cai, N. (2020)	Examine the relationship between opportunity-based entrepreneurship and the environmental quality of sustainable development	Quantitative/multiple regression	The results of this study show that opportunity-based entrepreneurship has a positive relationship with environmental quality of sustainable development
Huang, Y.J., Bu, Y.J., & Long, Z.H. (2023)	Expands the innovation perspective of the association between institutional theory and entrepreneurial willingness and helps to fully understand the influencing factors of college students' entrepreneurial willingness	Qualitative/fsQCA	The main results indicate (a) A regulatory environment is necessary for high entrepreneurial willingness, (b) There are two types of innovation models that produce high entrepreneurial willingness, and (c) The antecedent condition of the cognition system has a low impact on college students' entrepreneurial willingness
Johansson, J., Malmström, M., Wincent, J., & Parida, V. (2021)	Explores how government venture capitalists approve or reject financing applications	Qualitative/case study	Show the limited influence of the regulative and normative logics on government venture capitalists' decisions. Instead, individual decisions are observed to be largely overshadowed by cognitions and heuristics, which dominate formal regulations and socially constructed group-level norms
Julien, P.A. (2019)	What are the variables that explain entrepreneurial dynamism, and how may they be apprehended under the four necessary and complementary dimensions of this phenomenon, namely the demand, supply, institutional and spatial dimensions? And how should the nature and interrelatedness of these dimensions and their associated variables influence regional policymakers and other regional stakeholders in their efforts to stimulate entrepreneurship in their region?	Mixed methods/multiple regression and phenomenological approach	The main findings confirm the importance and interrelatedness of the four dimensions of entrepreneurial dynamism in providing new insights into these questions
Kara, O., Altınay, L., Bagis, M., Kurutkan, M.N., & Vatankhah, S. (2024)	Examines the institutional and macroeconomic variables that explain early-stage entrepreneurship activities in both developed and developing economies	Quantitative/panel data	Indicate that cognitive, normative and regulatory institutions affect early-stage entrepreneurship more positively in developed than developing countries

(continued)			
Authors (year)	Main objective	Study type/method	Results
Knörr, H., Alvarez, C., & Urbano, D. (2013)	Examines the influence of the cultural-cognitive dimension—measured through creativity, risk taking and independence—on the probability of becoming an entrepreneur or an employee	Quantitative/logit, probit, tobit model	Demonstrate that creativity, risk taking and independence increase the probability of becoming entrepreneur, and decrease the probability of becoming employee
Lang, R., Fink, M., & Kibler, E. (2014)	Adds to the knowledge of the role of regulative, normative and cognitive institutions in local entrepreneurial practices in rural Central Europe	Qualitative/case study	Suggests that the influence of regulative institutions on local entrepreneurship is tempered, if not superseded, by specific place-dependent normative and cognitive institutions, and that the fit between the different institutions is decisive for the emergence of entrepreneurial practices in a specific location
Langevang, T., Gough, K.V., Yankson, P.W.K., Owusu, G., & Osei, R. (2015)	Explore how time-and-place-specific institutional contexts influence women's entrepreneurship	Quantitative/other	The main results show how regulatory, normative and cultural-cognitive institutional forces, which have been transformed over time by local and global processes and their interaction, are concomitantly propelling and impeding women's entrepreneurial activities
Li, T.C. (2018)	Examine how country-level institutional dimensions impact the individual-level factors on internationalisation by early-stage entrepreneurial firms	Quantitative/multilevel analysis	Confirm that variables like Innovative competence, business scale, technological commitment and technological newness, predict internationalisation and also identify the positive moderating effects of institutions on this association
Li, Y.Q., Huang, S.S., & Song, L.H. (2020)	Examine the relationships between three dimensions of the country-level institutional environment (i.e. regulatory, cognitive and normative) and two types of hospitality entrepreneurship (opportunity-based vs. necessity-driven)	Quantitative/logit, probit, tobit model	Indicate that the three dimensions of institutional environment had different effects on hospitality entrepreneurship
Lim, D.S.K., Oh, C.H., & De Clercq, D. (2016)	Investigate the influence of individuals' household income and level of education on their engagement in entrepreneurship, as well as the interaction effects between these individual-level factors and country-level regulatory, cognitive and normative institutions	Quantitative/multilevel analysis	Indicate that the direct effect of individuals' household income on their engagement in entrepreneurship is persistent, regardless of institutional conditions; but the influence of education level varies contingent upon various institutional conditions

(continued)

Authors (year)	Main objective	Study type/method	Results
Lopez, T., Alvarez, C., & Urbano, D. (2025)	Addresses the research question: How do institutional dimensions (regulative, normative and cultural-cognitive) influence high-impact female entrepreneurship?	Mixed methods/fsQCA	Show that institutional dimensions significantly shape high-impact female entrepreneurship across different contexts. Also emphasize the importance of supportive normative environments, where family funding becomes crucial as female entrepreneurs demonstrate success
Maassen, C., Lopez, T., & Urbano, D. (2025)	Examine the association between regulative, normative and cultural-cognitive dimensions and sustainable entrepreneurship and sustainability impact in the entrepreneurially dynamic region of Catalonia, Spain	Qualitative/fsQCA	The main findings show that a strong normative dimension, measured through sustainability culture and the perception of sustainable business opportunities in the cultural-cognitive dimension both emerge as critical institutional enablers. Additionally, either the normative or cultural-cognitive dimension can compensate for the absence of government support (regulative dimension)
Manolova, T.S., Eunni, R.V., & Gyoshev, B.S. (2008)	Empirically validate an instrument for measuring country institutional profiles for the promotion of entrepreneurship in a sample of 254 business students from three emerging economies: Bulgaria, Hungary and Latvia	Quantitative/multivariate analysis	Suggest high reliability, internal consistency and construct validity of the instrument. Further, we find important differences in the three dimensions (regulatory, cognitive and normative) of the institutional profiles across the three emerging economies, reflecting their idiosyncratic cultural norms and values, traditions and institutional heritage in promoting entrepreneurship
Maurer, J.D., Creek, S.A., Bendickson, J.S., McDowell, W.C., & Mahto, R.V. (2022)	Empirically tests an additive effect of the three institutional pillars (i.e. cognitive, normative and regulative) on entrepreneurial activity and venture capital availability	Quantitative/panel data	Indicate that all three pillars play an additive role in spurring entrepreneurial activity. Furthermore, education, training, the favourability of the regulative institution, legitimizing media and social norms all play a significant role in venture capital development

(continued)			
Authors (year)	Main objective	Study type/method	Results
Mickiewicz, T., Rebmann, A., & Sauka, A. (2019)	To understand how the environment influences business owners/managers' attitudes towards tax morale, we build a theoretical model based on a neo-institutionalist framework	Quantitative/multiple regression	Show that legitimacy of the tax authorities and the government (normative dimension), feeling of belonging to the nation (cultural-cognitive dimension) and perceptions of the risk and severity of punishment (regulatory-instrumental dimension) are all associated with higher tax morale for business owners and managers
Mogos, R.M., Walliser, B., Holz Müller, H., & Guo, X.L. (2011)	Proposes a measure of the institutional country profile relevant to exporting small- and medium-sized enterprises (SMEs)	Quantitative/multivariate analysis	The main results propose a measure of the institutional country profile relevant to exporting small- and medium-sized enterprises (SMEs). Combined emic and etic research approaches suggest a scale, derived through in-depth interviews with French and Romanian managers in SMEs and tested with 107 French export managers
Moharrak, M., Alreshaid, F., Park, K.M., & Alsaber, A.R. (2025)	Examines the emergence of international hidden entrepreneurs (IHEs) in the Kingdom of Saudi Arabia through an institutional theory lens	Qualitative/other	The main results demonstrate how the institutional pillars intersect in the Saudi context, offering novel insights into informal entrepreneurship and its challenges to Saudi Vision 2030
Mohsen, K., Saeed, S., Raza, A., Omar, S., & Muffatto, M. (2021)	Argue that the effects of using the latest technologies on new venture innovation are moderated by the nature of a country's regulative, conducive, normative and cognitive environments	Quantitative/multilevel analysis	Indicate that the entrepreneur who employs higher levels of latest technology usage in a country exhibit higher innovation as compared to others as regulatory and conducive environments of the country strengthen
Moro, A., Fink, M., Maresch, D., & Fredriksson, A. (2018)	Explain how loan managers' trust can be affected by differences in the regulative institutions within the banks (type of bank) and by place-bound normative institutions (social context)	Mixed methods/multiple regression and case study	The main findings show that the positive impact of trust in lending relationships is sensitive to different place-bound normative institutions and to the regulative institutions within the banks
Ofteidal, E.M., Iakovleva, T.A., & Foss, L. (2018)	Investigate the effect of such context on students' entrepreneurial intentions and opportunity recognition	Quantitative/multiple regression	Indicate that two dimensions of university context in particular (regulative and normative) were shown to be of great importance in increasing entrepreneurial intentions and opportunity recognition among students

(continued)

Authors (year)	Main objective	Study type/method	Results
Rieger, V., Gründler, A., Winkler, H.J., Tschauner, B., & Engelen, A. (2021)	Argue that individuals (agents) are embedded in regulative, cognitive and regulatory institutions that either facilitate or inhibit the relationship between compassion and social entrepreneurial intentions	Quantitative/structural equation modelling and multilevel analysis	Compassion is linked to social entrepreneurship via the intervening cognitive mechanisms of feasibility and desirability and that this relationship is moderated by national institutions
Schillo, R.S., Persaud, A., & Jin, M. (2016)	Answer how individual-level and country-level institutional considerations interact to influence entrepreneurial intent	Quantitative/multilevel analysis	The main results show that entrepreneurial readiness construct is a more parsimonious and cogent representation of individual-level characteristics than several loosely connected individual traits. Moreover, entrepreneurial readiness has substantial explanatory power with regard to individuals' entrepreneurial intention
Shirokova, G., Morris, M.H., Laskovaia, A., & Micelotta, E. (2021)	Explores how country-level institutions moderate the link between causal and effectual behaviours and firm performance	Quantitative/multiple regression	Indicate that the effectiveness of causation and effectuation logics is influenced by the level of development of regulatory, normative and cultural-cognitive institutions
Sine, W.D., Cordero, A.M., & Coles, R.S. (2022)	Examine the existing research at the nexus of entrepreneurship and institutional theory while outlining a set of entrepreneurial phenomena to which the framework can be applied	Theoretical/literature review	Demonstrate how the unified framework (that used institutional theory to examine entrepreneurial phenomena) effectively organizes past research while also pointing to new and important areas for development
Sine, W.D., Haveman, H.A., & Tolbert, P.S. (2005)	Explore how the development of institutions reduces the risks of entering new sectors, or how it has an effect on the founding rates of firms using novel technologies than on firms using established technologies	Quantitative/other	Demonstrate how institutional forces can alter the mix of organizations entering a new industry and thus contribute to diversity, as well as similarity, among organizations
Spencer, J.W., & Gómez, C. (2004)	Identify normative, cognitive and regulatory institutional structures that may influence a country's entrepreneurial activity	Quantitative/multiple regression	Show that these three dimensions of the institutional profile, as well as economic factors such as per capita GDP, play distinct roles in promoting entrepreneurial activity in a country

Appendix 1 (continued)

Authors (year)	Main objective	Study type/method	Results
Steinz, H.J., Van Rijnsoever, F.J., & Nauta, F. (2016)	Identifies and explains the barriers that foreign cleantech start-ups can encounter when attempting to enter the Chinese market, as well as the possible strategies that can help overcome these barriers	Qualitative/case study	Recommend that cleantech entrepreneurs come prepared to China, remain flexible, associate themselves with reputable partners and take advice from those familiar with business in China. Cultural-cognitive barriers might be overcome by integrating the communities of foreign and Chinese start-ups
Stenholm, P., Acs, Z.J., & Wuebker, R. (2013)	Introduces a novel multidimensional measure of the entrepreneurial environment that reveals how differences in institutional arrangements influence both the rate and the type of entrepreneurial activity in a country	Quantitative/structural equation model	Suggest that differences in institutional arrangements are associated with variance in both the rate and type of entrepreneurial activity across countries
Stephan, U., Uhlaner, L.M., & Stride, C. (2015)	Develop the institutional configuration perspective to understand which national contexts facilitate social entrepreneurship (SE)	Quantitative/multilevel analysis	Show the importance of resource support from both formal and informal institutions, and highlight motivational supply side influences on SE. They advocate greater consideration of institutional configurations in institutional theory and comparative entrepreneurship research
Szylowicz, D., & Galvin, T. (2010)	Review recent work on institutional theory and international entrepreneurship to understand how scholars have applied institutional theory	Theoretical/literature review	The main results suggest a deeper application of institutional arguments in international entrepreneurship research, with extensions from current literature in organization studies that can contribute to a richer research agenda
Tang, Z., & Tang, J.T. (2012)	Propose that prospector and analyser strategies align better with entrepreneurial orientation to allow firms to fully benefit from their risk-taking, proactiveness and innovativeness	Quantitative/multiple regression	Confirm that prospector and analyser strategies alleviated the curve significantly. The defender strategy enhanced the curvilinearity, yet this moderating effect was insignificant
Tlaiss, H.A. (2019)	Examine Lebanese women entrepreneurs' conceptualizations of career success, the mechanisms they use to realize it and their overall awareness of it	Qualitative/other	Show the importance of contextualizing women's entrepreneurial experiences and demonstrate that Lebanese women entrepreneurs' conceptualizations of career success reflect both Arab social-cognitive and normative institutions and their own agency

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Authors (year)	Main objective	Study type/method	Results
Urbano, D., & Alvarez, C. (2014)	Examine the influence of institutional dimensions (regulative, normative and cultural-cognitive) on the probability of becoming an entrepreneur, while controlling for sociodemographic factors and macro variables	Quantitative/logit, probit, tobit model	Demonstrate, through logistic regression, that a favourable regulative dimension (fewer procedures to start a business), normative dimension (higher media attention for new business) and cultural-cognitive dimension (better entrepreneurial skills, less fear of business failure and better knowing of entrepreneurs) increase the probability of being an entrepreneur
Urbano, D., Guerrero, M., Ferreira, J.J., & Fernandes, C.I. (Urbano, et al., 2019b)	Explores how some strategic dynamic capabilities (entrepreneurial and export market) and supportive environmental conditions (regulative and normative) influence the configuration of technology entrepreneurship initiatives	Quantitative/multiple regression	Identify the appropriate strategies that entrepreneurial firms can adopt to cope with or even take advantage of the regulatory, cognitive and normative changes in China
Valdez, M.E., & Richardson, J. (2013)	Explores the institutional determinants of macro-level entrepreneurship	Quantitative/multiple regression	Suggest that a society's normative, cultural-cognitive and regulative institutions are related to entrepreneurial activity. Suggests that differences in values, beliefs and abilities may play a greater role than purely economic considerations of opportunity and transaction costs
Wahga, A.I., Blundel, R., & Schaefer, A. (2018)	Analyse the drivers of sustainable entrepreneurial practices in SMEs operating in a developing economy	Qualitative/case study	This paper provides new insights into sustainable entrepreneurship and motivations for environmental practices in an under-researched developing economy context
Wales, W., Shirokova, G., Beliaeva, T., Micelotta, E., & Marino, L. (2021)	Analyse how regulatory, normative and cognitive institutions moderate the entrepreneurial orientation (EO)-performance relationship	Quantitative/multivariate analysis	Show that entrepreneurs receive higher returns from an entrepreneurial strategic posture in countries where institutions-legal and financial systems, entrepreneurship education and cultural support for entrepreneurship-are more developed

(continued)			
Authors (year)	Main objective	Study type/method	Results
Wallin, A.J., & Fuglsang, L. (2017)	Explore and explain how new ventures aim to break institutional arrangements (i.e. regulations, normative rules and cultural-cognitive beliefs) that protect the field by introducing digitally enabled service innovations into healthcare markets	Qualitative/case study	Indicate that service innovations that require a change in the institutional structures of the health care system are enacted through three highly iterative key processes: institutional sensemaking that creates an understanding of prevailing institutional arrangements and that constructs meaning for institutional change efforts, theorization of change through linguistic device and modifications of institutions by building legitimacy and mobilizing external constituencies
Wang, J., Li, Y.K., & Long, D. (2019)	Illustrate how the institutional environment of an entrepreneurial ecosystem (EE) fosters the gender gap in entrepreneurial growth intention	Quantitative/structural equation model	This paper uncovers the overlooked deficiency in institutional practice by highlighting the gender inequality in the implementation process of entrepreneurial support policies and the distribution of entrepreneurial capabilities in society
Wang, T., Song, M., & Zhao, Y.L. (2014)	Explores the extent to which the signaling effect of early customers depends on these three types of legitimacy	Quantitative/panel data	Show that early customers are beneficial to new ventures, and the benefits of early customers to firm performance are higher when there is cognitive legitimacy from a capable founding team and regulative legitimacy from paying federal Social Security and Medicare taxes
Wang, T.Y., Thornhill, S., & De Castro, J.O. (2017)	Open new research avenues by extending and incorporating explanations and predictions of entrepreneurial orientation and legitimacy, two areas that have largely been considered as independent of each other	Quantitative/multiple regression	Show that entrepreneurial orientation and legitimacy can be interactively beneficial to new ventures. An entrepreneurial orientation is important for new ventures to exploit entry opportunities. Evidence suggests that legitimacy magnifies returns from an entrepreneurial orientation, even though it may not create economic value directly. This finding enhances recent theory development on the broader utilities of legitimacy for new ventures
Watson, T.J. (2013)	Identify the underlying logic of entrepreneurial action and its relationship to its economic and social setting	Qualitative/other	This paper contextualized, non-positivist approaches better capture entrepreneurship's social complexity than linear, physics-like models

(continued)

Authors (year)	Main objective	Study type/method	Results
Widz, M., & Kammerlander, N. (2023)	Propose that contextual factors affect family succession intentions as opposed to family-external exit intentions and theorize how regulative, normative and cultural-cognitive institutional pillars affect exit intentions in the context of transition economies, a special case of emerging economies with no path dependence related to an entrepreneurial exit characterized by institutional voids, which are filled in by the national culture	Quantitative/logit, probit, tobit model	Show that labour market development decreases, normative pressure of reference groups increases and paternalistic leadership style decreases family succession intentions. This study contributes to the literature about entrepreneurial exit, family firm succession and neoinstitutional theory
Williams, C., & Spielmann, N. (2019)	Examine how external institutional pressures influence international market orientation (IMO) in small- to medium-sized enterprises (SMEs)	Quantitative/multiple regression	The main results show that external decision-making pressures (not internal resources/capabilities) drive SMEs' international market orientation (IMO); regulative pressures are strongest: national laws depress IMO, international laws enhance it; only partial support for normative pressures from distributors and end-consumers
Xie, Z.M., Wang, X., Xie, L.M., Dun, S., & Li, J.X. (2021)	Proposes an integrative framework to explore the configurational effect of multiple institutions on FENT and growth expectation among female entrepreneurs (FEGE) using the fuzzy-set qualitative comparative analysis	Qualitative/fsQCA	Show both high FENT (Female entrepreneurship) and growth expectation among female entrepreneurs (FEGE) are generated by configuration of institutions
Yiu, D., & Makino, S. (2002)	Provide a unifying theoretical framework to examine the relationship between transaction costs and institutional perspectives	Quantitative/logit, probit, tobit model	This paper found that multinational enterprises tend to conform to the regulative settings of the host-country environment, the normative pressures imposed by the local people and the cognitive mindsets as bounded by counterparts' and multinational enterprises' own entry patterns when making foreign entry-mode choices
Yousafzai, S.Y., Saeed, S., & Muffatto, M. (2015)	Examine the mediating role of the vision for women's entrepreneurship (VWE) on the relationship between the pillars of institutional theory and women's entrepreneurial leadership (WEL)	Quantitative/structural equation model	Results suggest that the institutional pillars influence vision for women's entrepreneurship (VWE). Regulatory institutions, entrepreneurial cognitions and entrepreneurial norms have a direct and an indirect effect (through VWE) on women's entrepreneurial leadership (WEL)

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Authors (year)	Main objective	Study type/method	Results
Yu, J., Zhou, J.X., Wang, Y.G., & Xi, Y.M. (2013)	Exploring the interaction of entrepreneurs in rural China and their institutional environment	Qualitative/other	The main results show that due to weak regulatory protection of intellectual rights, rural entrepreneurs in China tend to work on innovations on their own or with close family members instead of collaborating with external sources; these entrepreneurs use guanxi strategically to deal with constraints from the institutional environment; it is important to build legitimacy by either building alliances with large, established firms, or acquiring approval from people of authority

Appendix 2 Journals and published articles per period regarding institutional dimensions and entrepreneurship

Journal	Before 2010	2011–2015	2016–2020	After 2021	Total
Small Business Economics	1	2	2	5	10
International Business Review	3	1	3	0	7
International Journal of Entrepreneurial Behavior & Research	0	0	5	2	7
Entrepreneurship and Regional Development	1	1	3	1	6
Journal of Business Research	1	1	0	4	6
Management Decision	0	1	1	2	4
Entrepreneurship Theory and Practice	1	1	1	0	3
International Entrepreneurship and Management Journal	0	1	2	0	3
Journal of Small Business Management	0	2	0	1	3
Organization Science	1	0	1	1	3
Business Strategy and the Environment	0	0	1	1	2
International Small Business Journal-Researching Entrepreneurship	0	1	1	0	2
Journal of Innovation & Knowledge				2	2
Journal of International Business Studies	1	1	0	0	2
Regional Studies	0	0	1	1	2
Review of Managerial Science	0	0	0	2	2
Academy of Management Journal	1	0	0	0	1
Academy of Management Perspectives	0	0	0	1	1
Administrative Science Quarterly	1	0	0	0	1
Asia Pacific Journal of Management	0	1	0	0	1
British Journal of Management	0	0	0	1	1
Economic Geography	0	1	0	0	1
Education and Training	0	0	1	0	1
European Planning Studies	0	0	0	1	1
Global Strategy Journal	0	0	0	1	1
Information Technology for Development	0	0	1	0	1
Journal of Business Ethics	0	0	1	0	1
Journal of Business Venturing	0	1	0	0	1
Journal of Cleaner Production	0	0	1	0	1
Journal of Enterprise Information Management	0	0	1	0	1
Journal of International Management	0	0	0	1	1
Journal of Product Innovation Management	0	1	0	0	1
Journal of Technology Transfer	0	0	1	0	1
Strategic Entrepreneurship Journal	0	0	1	0	1
Technovation	1	0	0	0	1
Tourism Management Perspectives	0	0	1	0	1
Total	12	16	29	27	84

Proxies for measuring institutional dimensions in the study of entrepreneurship

Dimension	Classification	Operationalisation	Level*	Articles	Sources
Regulative	Specific for entrepreneurship	<ul style="list-style-type: none"> Government organizations in this country assist individuals with starting their own business The government sets aside government contracts for new and small businesses Local and national governments have special support available for individuals who want to start a new business, The government sponsors organizations that help new businesses development Even after failing in an earlier business, the government assists entrepreneurs in starting again Formal rules and government institutions support entrepreneurship There is a sufficient formal network to support entrepreneurship Ecosystem Rule of law Regulatory quality 	Macro/meso/micro	(Audretsch et al., 2025; Busewitz et al., 2000; Handrito et al., 2023; Manolova, et al., 2008; Spencer & Gomez, 2004)	Primary
Regulative	General	<ul style="list-style-type: none"> Regulation of credit, labour and business Financial stability Government support Government size Ease of doing business Business Freedom Property rights Fiscal freedom Investment freedom 	Meso	(Agostino et al., 2020)	Regional indexes based on secondary databases
Regulative	General		Macro	(Alvarez et al., 2025; Bosma et al., 2018; Chowdhury et al., 2019; Díez-Martín et al., 2016; García-Cabrera et al., 2020; Lopezt et al., 2025; Stephan et al., 2015; Yousafzai et al., 2015)	Fraser Institute Economic Freedom project (IEF) World Intellectual Property Organization (WIPO) Doing Business World Development Indicators

(continued)

Dimension	Classification	Operationalisation	Level*	Articles	Sources
Regulative	Specific for entrepreneurship	<ul style="list-style-type: none"> • There are sufficient government subsidies available for new and growing firms • Government policies (e.g. public procurement) consistently favour new firms • The support for new and growing firms is a high priority for policy at the local government level • Taxes and other government regulations are applied to new and growing firms in a predictable and consistent way • Coping with government bureaucracy, regulations and licensing requirements is not unduly difficult for new and growing firms • There is an adequate number of government programs for new and growing businesses • Government programs aimed at supporting new and growing firms are effective 	Micro	(Bağış et al., 2023)	Primary
Regulative	Specific for entrepreneurship	<ul style="list-style-type: none"> • Financing for entrepreneurs • Government support and policies • Taxes and bureaucracy • Governmental programmes • Basic school entrepreneurial education and training • Post-school entrepreneurial education and training • Research and Development (R&D) transfer • Commercial and professional infrastructure • Internal market burdens or entry regulation • Physical Infrastructure • Stringency of environmental regulations 	Macro	(Arabiyat et al., 2019; Beynon et al., 2021; De Clercq et al., 2010; Kara et al., 2024; Lim, et al., 2016)	GEM- NES
Regulative	General		Macro	(Bernal et al., 2022)	World Economic Forum

(continued)

Dimension	Classification	Operationalisation	Level*	Articles	Sources
Regulative	Specific for a sector/type of entrepreneur	<ul style="list-style-type: none"> Contract agreements among SMES and Universities 	Meso	(Bjerregaard, 2010)	Primary
Regulative	Specific for a sector/type of entrepreneur	<ul style="list-style-type: none"> Legal systems of countries. Categories from La Porta et al. (1999) Political risk Rights protection index developed by Ginarte and Park (1997) RV1: The Malaysian government assists individuals to start their own social entrepreneurship venture RV2: The Malaysian government sets aside government contracts for new and small social entrepreneurs RV3: Local and national governments support individuals starting a social venture RV4: The government sponsors organisations that help new social ventures develop RV5: After failing, the government assists social entrepreneurs to start again RV6: The government communicates its policies regarding supporting new social entrepreneurs 	Macro	(Coeurderoy & Murray, 2008)	Primary
Regulative	Specific for a sector/type of entrepreneur	<ul style="list-style-type: none"> Equalitarianism Fear of failure Entrepreneurship as a good career choice High status to successful entrepreneurs Media attention for entrepreneurship Cultural and Social Norms encourage or allow actions leading to new business methods or activities 	Micro	(Ghazali et al., 2021)	Primary
Normative	Specific for entrepreneurship		Macro/ Micro	(Alvarez et al., 2025; Bosma et al., 2018; Chowdhury et al., 2019; Díez-Martín et al., 2016; Graham & Bonner, 2024; Kara et al., 2024; Lopez et al., 2025; Yousafzai et al., 2015)	GEM

(continued)

Dimension	Classification	Operationalisation	Level*	Articles	Sources
Normative	Specific for entrepreneurship	<ul style="list-style-type: none"> • Turning new ideas into businesses is an admired career path in this country • In this country, innovative and creative thinking is viewed as the route to success • Entrepreneurs are admired in this country • People in this country tend to greatly admire those who start their own business • There is a strong awareness of sustainable behaviour by entrepreneurs in my region/city • There is a sufficient support and availability of informal networks to support entrepreneurship Ecosystem • There is a strong political entrepreneurship in my city 	Macro/Micro	(Audretsch et al., 2025; Busenitz et al., 2000; Handrito et al., 2023; Manolova, et al., 2008; Spencer & Gomez, 2004)	Primary
Normative	Specific for entrepreneurship	<ul style="list-style-type: none"> • Creation of new ventures is considered an appropriate way to become rich • Perception of entrepreneurship as a good career choice • Perception of a high societal status for successful entrepreneurship • Media attention given to successful entrepreneurs • Most people think of entrepreneurs as competent, resourceful individuals • Environmental awareness 	Macro	(Arabiyat et al., 2019; De Clercq et al., 2010; Lim et al., 2016)	GEM- NES
Normative	General		Macro	(Bernal et al., 2022)	World Economic Forum

(continued)

Dimension	Classification	Operationalisation	Level*	Articles	Sources
Normative	Specific for a sector/type of entrepreneur	<ul style="list-style-type: none"> • CV1: Turning new ideas into social ventures is admired in this country • CV2: In this country, innovative and creative thinking is viewed as a route to success • CV3: Social entrepreneurs are admired in this country • CV4: People in this country greatly admire those who start their own social Venture • CV5: Social ventures give support to other new and small social ventures 	Micro	(Ghazali et al., 2021)	Primary
Normative	General	<ul style="list-style-type: none"> • Socially supportive culture • Individuals know how to legally protect a new business, • Those who start new businesses know how to deal with much risk • Those who start new businesses know how to manage risk, • Most people know where to find information about markets for their products • There is enough support of independent mass media (press) to entrepreneurship in my region • There is a strong entrepreneurship culture and orientation in my region/city 	Macro Macro/ Meso/ Micro	(Stephan et al., 2015) (Audretsch et al., 2025; Busenitz et al., 2000; Handrito et al., 2023; Manolova, et al., 2008; Spencer & Gomez, 2004)	GLOBE project Primary
Cultural-cognitive	Specific for entrepreneurship	<ul style="list-style-type: none"> • Entrepreneurial intentions • Knowledge, skill and experience required to start a new business • Knowing an entrepreneur • Fear of failure • Opportunity perception • Involvement of employees in entrepreneurial activities 	Macro/Micro	(Alvarez et al., 2025; Arabiyat et al., 2019; Bosma et al., 2018; Chowdhury et al., 2019; Diez-Martin et al., 2016; Graham & Bonner, 2024; Kara et al., 2024; Lopez et al., 2025; Yousafzai et al., 2015)	GEM

(continued)

Dimension	Classification	Operationalisation	Level*	Articles	Sources
Cultural-cognitive	Specific for a sector/type of entrepreneur	<ul style="list-style-type: none"> • Previous experience in international business will influence the choices made by the young firm when facing regulatory issues 	Micro	(Coeurderoy & Murray, 2008)	Primary
Cultural-cognitive	Specific for entrepreneurship	<ul style="list-style-type: none"> • Colleges and universities provide good and adequate preparation for starting up and growing new firms • The level of business and management education provides good and adequate preparation for starting up and growing new firms • The vocational, professional and continuing education systems provide good and adequate preparation for starting up and growing new firms 	Macro	(De Clercq et al., 2010; Kara et al., 2024; Lim et al., 2016)	GEM- NES
Cultural-cognitive	Specific for a sector/type of entrepreneur	<ul style="list-style-type: none"> • PV1: I Know how to protect a social entrepreneurship venture legally • PV2: I Know how to deal with risk when starting a social entrepreneurship venture • PV3: I Know how to find the market for a social entrepreneurship venture 	Micro	(Ghazali et al., 2021)	Primary
Cultural Cognitive	General	<ul style="list-style-type: none"> • Postmaterialism index 	Macro	(Stephan et al., 2015)	World Values Survey

* *Macro*, country level; *meso*, organization, university level, family level; *micro*, individual level.

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Data availability The datasets generated and analysed in this review are available from the corresponding author upon request.

Declarations

Ethical approval This literature review was conducted following ethical research standards. All sources of information have been properly cited to acknowledge the original authors and avoid plagiarism. No unpublished or confidential data were used, and all efforts were made to ensure the accuracy and integrity of the information presented. This review does not involve human participants or personal data, and therefore did not require ethical approval from an institutional review board.

Conflict of interest The authors declare no competing interests.

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