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Joint Ventures impact on its partners' performance: systematic literature review

Journal:	*Managerial Finance*
Manuscript ID	MF-07-2024-0517.R1
Manuscript Type:	Original Article
Keywords:	Joint Venture, Strategic Equity Alliance, Joint Venture partner firm, Joint Venture partner performance

1. Introduction

The current business context is characterized by the competitiveness of the VUCA environment (Volatility, Uncertainty, Complexity and Ambiguity), in which companies constantly find themselves searching for new and different ways to boost growth and gain a competitive advantage (Almarri, 2024). In this sense, the Joint Venture (JV) has become an important part of business strategy as a key component of companies' growth strategies (Arora et al., 2023), and its effective and efficient financial management is essential to ensure the JV's and its partner business sustainability and growth, helping in estimating and allocating resources effectively, managing risks and making the right decisions (Salamah, 2023).

The Joint Venture [1] is a business structure based on collaboration (Parmigiani & Rivera-Santos, 2011) between two or more independent companies, in which they share and coordinate their resources and capabilities (García Canal, 1992; Grant, 1999; Gulati, 1998; Hubbard et al., 2018; Ireland et al., 2002; O'Dwyer & Gilmore, 2018; Panico, 2017) to achieve common goals (Albers et al., 2016; Barney, 1991; García Canal, 1992; Gulati, 1998; Kogut, 1988) and where the relationship between the parties is based on non-subordination (non-dependence) (García Canal, 1992). These companies allow their partner companies to purchase resources efficiently, reducing the inherent risk in such processes as well as the period for attaining those resources. Based on this definition and taking various perspectives as a reference, we can identify characteristic traits of structures like these. For example, from a strategic perspective, these structures are medium and long-term (Levi et al., 2020) contractual arrangements that contribute to strategies for entering new markets abroad, new product developments and organizational learning.

Whereas, from a legal perspective, in terms of governance structure, they are the type of agreement that leads to more complexity under the framework of alliances, given that partners exercise control through shared ownership (Velez-Calle, 2020), while dealing with two or more independent companies that join together within a common legal organization (Majocchi et al., 2013), through the creation of a new organization, or by means of a partial acquisition of the other party's capital (Velez-Calle, 2020).

This share capital has been the subject of study by various authors. Distinguished authors in this area of expertise such as Makino & Beamish (1998), Gomes-Casseres (1989), and Chowdhury (1992), consider that the shareholdings over the JV must be higher than 10%, and others Artisien & Buckley (1985) higher than 25% and lower than 79%. Additionally, from the contributions of these latest authors, Beamish & Lupton (2009), Choi & Beamish (2004), Demirbag & Mirza (2000), Huang et al. (2015) and Park (2011) shareholding of the JV partners is defined at between 20% and 80%. Thus, it could be argued that such a small percentage of equity ownership, such as 10%, may not reflect the reality of joint ventures and the nature of partner relationships, but would simply increase the sample size (Demirbag & Mirza, 2000). Hence, for the purposes of this study we take the definition of the threshold of share capital as being between 20% and 80%, as was recently made by the authors Beamish & Lupton (2009), Choi & Beamish (2004), Demirbag & Mirza (2000), Huang et al. (2015) and Park (2011).

According to previous studies by Beamish (1988), Chowdhury (1992), Demirbag & Mirza (2000), Gomes-Casseres (1987) and Gomes-Casseres (1989) JVs are divided into three categories, according to the level of participation of the parent companies. They are considered majority-

owned when the parent's share is 51-79%, jointly (or 50%) owned when the share is exactly 50%, and minority-owned when the share ranges from 20% to 49%.
Lastly, from the perspective of accounting of the partner companies, the JV is considered a long-term investment and is recognized in the balance sheet of the partner companies as one of the components of the non-current asset, or more specifically, a "long-term financial investment".

As can be seen from the various approaches referred to, the JV is a phenomenon that has generated interest from academia, especially in terms of performance of the JV partner companies (Arora et al., 2023). According to these authors, performance is considered a key parameter for understanding the success or failure of the JV, as well as a tool for making comparisons with other forms of collaboration. In the above-mentioned studies, various performance parameters were used as response variables, the most common ones being financial performance, satisfaction of the interested parties and the achievement of the objectives, among others (Arora et al., 2023). By contrast, the selection of the explanatory variable has varied in accordance with the theoretical framework of the research, from those based on resources to those based on transaction costs (Arora et al., 2023). Although the most popular performance indicator for analyzing the influence of joint ventures on their associated companies is financial, there are also other performance indicators that provide relevant information for the effective management of the company and the joint venture. Therefore, it is possible to study the effect of joint ventures on the performance of their associated companies in a comprehensive manner, which provides further information for subsequent decision making. In addition, existing studies indicate a lack of significant contribution in terms of the relationship between the variables measuring such influence, as well as, the characteristics that make such an influence greater or lesser, since there are unclier results.

Because of that, the purpose of this research is to contribute to the business management field, to identify the variables that measure the impact of the Joint Venture on the performance of its partner companies and to consider all performance dimensions studied on the literature.

Firstly, we perform a descriptive analysis to determine the performance dimension that the authors have mainly used to measure the effect of JVs on their partner companies, as well as its application depending on the region in which the JV partner company is located. We also define the most widely applied methodology for its analysis.

Secondly, we identify the variables that measure the influence of the JV on its partner's performance and which business characteristics have a greater or lesser impact on this effect.

Lastly, we propose future new research lines, based on the analysis and results obtained in this SLR.

This article consists of the following 4 sections: section 2 provides information on the methodology adopted to achieve the objective; section 3 is a summary of the results obtained, including a critical assessment and conclusions; and section 4 discusses our suggestions, conclusions and future lines of this research.

2. Review methodology:

This study uses the systematic review approach, which emphasizes scientific rigor and follows a transparent and reliable process (Tranfield et al., 2003). In this study, the SLR allows us to search for published research on the performance variables of Joint Venture partner companies, and to consider the reviewer's choice of analysis, the methodology applied and the conclusions obtained.

By implementing systematic procedures and protocols, we can generate new knowledge that enriches Joint Venture and Finance Management studies, professional practices and policy development (Arjun & Subramanian, 2024).

This article applies this technique in order to minimize any manual selection bias and to include all studies that allow us to gain a full understanding of the work carried out by various authors in the business management field concerning the effects of JVs on their partner companies, as well as the features of the partnership that contribute to such effects during the study period.

In order to objectively compile the literature and accurately record the reason for the review and findings, researchers developed the standard protocol, known as the PRISMA declaration (Preferred Reporting Items for Systematic reviews and Meta-Analyses) (Page et al., 2021) (Figure 1). PRISMA-2009 protocol is the most widely used review protocol across various research domains (Siddaway et al., 2019).

2.1. Data identification and retrieval

2.1.1. Search string

This study devised a search string following that used by various researches (Beamish, 1985; Beamish & Banks, 1987; Lu & Beamish, 2001; Woodcock et al., 1994), and which is used by the author Paul Beamish, a renowned author in numerous academic journals, when applied in the field of Joint Venture and performance. This author is the second most cited author according to Google Academics.

Based on the review performed of Paul Beamish's articles, in the domain of Joint Venture, the keyword "Joint Venture" is the suitable keyword for identifying articles, while Strategic Equity Alliance and Equity Joint Venture are also considered synonymous. Moreover, we consider the term "performance measurement" as a synonym for performance, as it is a measurement indicator. And finally, parent and partner as synonyms referring to JV partner companies.

2.1.2. Database and data extraction

In order to identify relevant journal articles, the keyword search was conducted in two databases that index relevant academic publications (Franco-Santos et al., 2012; Graña-Alvarez et al., 2024), namely Scopus and Web of Science (WoS). As stated by Kumpulainen & Seppänen (2022), these two sources generally represent the primary databases and citation indexes for broad scientific literature, encompassing journal articles, conference proceedings, and books. While both, WoS and Scopus, cover a wide range of scientific disciplines, they have only partially overlapping areas: WoS extensively covers natural sciences and engineering, whereas Scopus provides relatively broader coverage in the social sciences (Kumpulainen & Seppänen, 2022). Therefore, it is assumed that integrating these data sources could lead to more comprehensive results across fields of literature (Kumpulainen & Seppänen, 2022).

The time frame reviewed was between the years 2000 to 2023. This time interval is established based on the contributions made in the literature on the definition of the threshold of share capital the companies hold over the JV. From the year 2000 onward, the majority of authors (Beamish & Lupton, 2009; Choi & Beamish, 2004; Demirbag & Mirza, 2000; Huang et al., 2015; Park, 2011) identify JVs as a form of collaboration between two or more independent companies, in which they share and coordinate their resources and capacities to achieve common goals and where the relationship between the associated parties is based on non-subordination and the shareholding of the partners of the JV is between 20% and 80%.

For an article to be considered for the review, it had to include a combination (AND conjunction) of three groups of keywords in the title, keywords or abstract.
The first group of keywords addressed the term “Joint Venture” and ensured the inclusion of articles that mention “Joint Venture” in all possible meanings. This was operationalized using the following search phrase: “Equity Joint Venture*” OR “Strategic Equity Alliance*”.

The second group of keywords aimed to address Joint Venture partner. Following this, the second keyword group is: “Partner*” OR “Parent*”.
Finally, the third group of keywords refers to the “performance measurement” of a Joint Venture partner. For this, the keyword group is: “Performance measurement*” OR “Performance”.

The use of asterisks in the three keyword groups allowed for different suffixes.

The scope of the search is limited to documents from journals belonging to areas of research within the business management field, which included terms such as: business economics, business, management and accounting, economics, econometrics and finance.

Book chapters, work documents and conference articles are excluded, with only journal articles selected so as to ensure their quality.

Lastly, the scope of our research is limited to the English language.

Using these inclusion/exclusion criteria, the results obtained from the search are the following (Figure 1). In the first screening, 1,135 articles were identified from both databases, 294 in Scopus and 841 in WoS. Subsequently, 144 duplicate articles were deleted, obtaining a sample of 991 articles. Afterward, the titles and summaries of each one of the articles were read out to see if the inclusion and exclusion criteria applied. Once read and the defined criteria applied, 931 articles were excluded, because, on the one hand, they were articles that study the performance of JV companies or other type of strategic alliances, and on the other hand, they studied the effect of certain business context variables on performance. These exclusions resulted in a sample of 60 articles. Finally, the articles were read in full, and we excluded 33 articles because they were articles that identify and/or study the effect that the motivations for forming JVs have on the performance of both JVs and their partners, resulting in total of 27 valid articles selected for inclusion in the analysis of this research.

We used Parsifal, a web-based tool in performing a systematic literature review, as a platform to plan, conduct and report on the review. This platform is considered a valuable methodological tool to carry out this type of research (Stefanovic et al., 2021).

In addition, it allows direct search from the tool in the case of Scopus and Science Direct databases, and in the remaining cases (ACM Digital Library, El Compendex, IEEE Digital Library, ISI Web of Science, Springer Link), through the import of studies.

Insert figure 1 about here

3. Results:

To address the research objective, this section presents the results of the analysis of the sample of 27 articles included in the study. The analysis consists, first of all, of carrying out a descriptive analysis of the selected articles; and secondly, in defining the performance measurement variables, grouped by dimensions, of the JV partner companies, and the features of those partnerships; and finally, to assess and discuss the results obtained.

3.1. Descriptive analysis

Figure 2 shows the publication trend of articles from 2000 to 2023. We can see that there is no constancy in the number of publications over the years, especially, between the years 2000 and 2014. Instead, from 2014 onward, the trend changes and the authors' interests in these studies increases. An increase in publications was seen following United Nations approval of the Millennium Development Goals (MDG) in the year 2000 and the Sustainable Development Objectives (SDO) in 2015. The Strategic Alliances were present in both declarations, which might have helped promote the topic of this study.

Insert figure 2 about here

The 27 articles analyzed in the review, were published in 25 different journals, of which 63% of them were published in European journals, and 30% in North American journals. This shows the special interest of both continents in investigating the impact of Joint Ventures on the performance of their partner companies.

Regarding quality indicators, the articles included in the study are of high relevance in the scientific literature. According to the impact factor, about 67% of this research was published in quartiles 1, and 22% in quartiles 2, according to the Journal Citation Reports (JCR) and Country Rank (SJR), in the year of publication.

The methodologies applied to the research analyzed generally deals with statistical methods such as regression analysis (74%), factor analysis (4%) and structural equation modeling (11%). However, some systematic reviews (11%) of the literature were also carried out.

Finally, researchers have studied the impact of Joint Ventures on the performance of their partner companies (Table I), mainly at the financial and innovation level, and then at the market

and learning level, in companies all over the world. However, market performance has been studied mainly in European, South American, South African and Asian companies.

Insert table I about here

Finally, we observed that the study of the effect of JVs on the performance of their partner companies has been studied from different performance typologies, but not comprehensively. However, the studies do cover the individual performance dimensions of companies around the world, generally applying the regression analysis methodology.

3.2. Effects of JVs on the multiple dimensions of performance of their partner companies

The results obtained in the review show that, when discussing the effect that leads to the alliances with their partner companies, generally we are talking about the influence on the performance of these types of companies.

The performance of a company is an important criterion for determining its efficiency and effectiveness (Emami et al., 2022). In turn, it is one of the most important criteria for the senior management to have a clear understanding of its company and thus, make the right decisions (Emami et al., 2022).
Within the framework of the alliances, (Emami et al., 2022) indicate that the performance of the partner companies of the strategic alliances are influenced by these types of collaboration agreements.
In the present study, the performance types have been classified into the following categories: financial performance, market performance, innovation performance, learning performance, and then we assigned each of the dimensions, into measurement parameter groups and indicators (Table II).

Insert table II about here

Within the **Financial Performance** dimension, we identified 9 groups of parameters: leverage, market, profitability, revenue, financial risk, sales, turnover, value creation and productivity.

Leverage is a measurement parameter of the company's capital structure that can be measured in different ways. However, the authors Zambuto et al. (2017) measure it by dividing the total book value of the debt (long-term debt plus bank loans included in the current liability) by the total book value of the debt plus the market value of shareholder's equity. These authors show that companies who participate in alliances reduce their level of leverage and this impact depends on the business features, such as the choice of the governance form because of the uncertainty/instability of the alliance, and the characteristics of the partners a firm is able to attract. The results obtained by these authors confirm that higher leverage implies greater uncertainty/instability at the alliance level and has an impact on the choice of governance form, as it could also determine the characteristics of the partners that a company is able to attract.

Market as a financial performance parameter refers to the parent firm's market share and market value indicators. Market share is measured by the share of each firm in total sales of the

industry. In this sense, Dussauge et al. (2004) observe changes in market share in 3-year periods and state that longer-lived alliances lead to greater changes in market share, while Rosli (2011) concluded that there is a positive effect between the JV and firm market share. These authors also confirm that firm age and firm ownership structure in the alliance significantly influenced this relation. In contrast, Liu et al. (2022) employ a market value indicator that combines the accounting data of firms with their valuation in financial markets. This measurement has frequently been employed to assess the value of intangible asset returns to a firm's financial performance.

Profitability is the parameter that more authors have used to measure the performance of the JV partner companies. Profitability shows how cost-effective a company is (Kim et al., 2021) and, we can identify two main methods of measuring. Firstly, we find those authors (Dewally & Gordon, 2022; Merchant, 2004) who estimate it using abnormal returns, secondly, those, (Dewally & Gordon, 2022; Jiang & Li, 2008) who estimate it using the remaining profitability indicators, such as return on assets (ROA), return on equity (ROE) and return on investment (ROI), and finally those (Dewally & Gordon, 2022; Nakamura & Nakamura, 2004) who employ stock return measurement.
Authors Dewally & Gordon (2022) and Merchant (2004) use abnormal indicator returns to estimate the company's change in value after forming the alliance. In this case they estimate this change of value using its cumulative abnormal return, which is the sum of abnormal daily performances during specific periods of the day -1 to the day +1. On the other hand, with respect to the profitability indicators, authors Dewally & Gordon (2022), Jiang & Li (2008) and Liu et al. (2019) use the ROA as the indicator to estimate the average annual return on assets, while Dewally & Gordon (2022) also employ ROE to estimate the average annual return on the shareholder's equity. The ROA is calculated by dividing the net income by total assets, while for the ROE, it is divided by the shareholder's equity. Apart from these indicators, Dewally & Gordon (2022) and Sivakumar et al. (2011) also use other profitability indicators such as the Tobin's Q and firm sales, and Jiang & Li (2008) use return on investment (ROI). Although there is a variety of indicators for measuring the effect of JVs on their partner company's profitability, all of them conclude that they are influenced by JVs.

Moreover, these studies conclude that a firm's prior strategic alliance experience (Merchant, 2004; Nakamura & Nakamura, 2004), age (Dewally & Gordon, 2022; Kim et al., 2021; Nakamura & Nakamura, 2004), size (Dewally & Gordon, 2022; Kim et al., 2021; Merchant, 2004), financial position (Dewally & Gordon, 2022; Nakamura & Nakamura, 2004), industry characteristics (Kim et al., 2021; Merchant, 2004; Nakamura & Nakamura, 2004), country characteristics (Merchant, 2004), ownership structure (Dewally & Gordon, 2022; Jiang & Li, 2008; Merchant, 2004), market position (Dewally & Gordon, 2022; Merchant, 2004), capabilities and resources (Jiang & Li, 2008; Kim et al., 2021), innovation position (Kim et al., 2021; Zambuto et al., 2017), type of partner (Dewally & Gordon, 2022; Merchant, 2004), synergies between partners (Merchant, 2004) and the alliance portfolio size (Dewally & Gordon, 2022) all have, an influence on this effect.

The results obtained from the study by Nakamura & Nakamura (2004) demonstrate that the more experience a JV partner has with operating JVs, the more opportunities it will have for participating in new JVs. In this sense, having gained more experience in managing JVs, JV partners will also have more opportunities to invest in such intangible assets such as R&D, advertising and marketing, and the partners' firm's performance generally increases. Moreover,

Merchant (2004) confirms that experienced partners can anticipate challenges related to a JV implementation earlier than would otherwise be possible.
The firm age, size, financial position, industry characteristics, country characteristics and the alliance portfolio size, act as control variables in the JV partner performance measurement.
In turn, the Dewally & Gordon (2022) study finds that financial markets react positively to formal partnerships, like JVs, with positive initial market reactions upon their announcement, as well as a higher valuation. Notwithstanding, Merchant (2004) ensures that this variable may not always be favorable for creating shareholder value via JVs if these variables can be combined in ways that compensate for one domain's relative weaknesses with the other's relative strengths.
Kim et al. (2021)'s and Jiang & Li (2008)'s studies addressed that JV partner knowledge acquisition through the other JV partner has a positive effect on innovation performance and in turn, leads to superior financial performance.
Furthermore, Dewally & Gordon (2022) and Merchant (2004) adds that the JV ownership structure provides a rough index of partner's relative bargaining power, implying that majority partners may use their equity position to exert undue control over JV management. Similarly, a minority equity position can also trigger the opportunistic attitudes, which by virtue of its minority position, may have relatively less to lose by shirking its obligations. This increases the costs of monitoring partners behavior. In contrast, an equal equity position can raise costs associated with the use of mechanisms needed to alleviate the coordination challenges and potential conflicts between partners, and increase the organizational complexity of managing JVs. Moreover, Jiang & Li (2008) propose that organizational learning will be more important when its equity participation is stronger. Including formal controls and communication mechanisms, joint decision making, and mutual commitment and trust, facilitates interorganizational learning and knowledge exchange. A JV partner can therefor expect increased learning efficiency and effectiveness, and they should be willing to modify their learning intent and capability in order to improve financial results.
The type of partner (institutional ownership participation, profit-seeking firms…) also influences JV financial performance, because it can require dissimilar approaches to JV management and effect the parent's shareholder value.
Finally, in this study, Merchant (2004) affirms that it is widely recognized that cultural distance influences joint venture outcomes by increasing firms' business uncertainty and information costs of operating in international locations. A smaller cultural distance facilitates the transfer of home management techniques and this reduces transaction costs and improves the performance, although not always favorable for creating shareholder value when combined with other weaknesses and strengths.

Revenue is income that a company receives through the sale of a product or service to its customers. To study the effect of the alliances on the revenue of their partner companies, Kim & Choi (2014) have made estimations based on variations in sales revenue. Theses authors state that the JVs do influence their partner companies and, this effect depends on the firms' capabilities, reputations, bargaining power, and the alliance portfolio (Kim & Choi, 2014). The results of these authors' analysis show that relatively lower innovativeness, relatively better reputation, and relatively greater bargaining power are better for performance.

Authors Dewally & Gordon (2022) add that JVs reduce the capacity of their partner companies to manage the financial risk. The *financial risk* is measured by cash flow volatility, operation assets and profitability assets of the shares. This study shows that the participation in one JV increases the company's financial risk. Moreover, firm age, size, ownership structure, financial

position, market position, type of alliance, and the alliance portfolio size contribute positively to this effect (Dewally & Gordon, 2022).

Sales of the partner companies of the alliance is another performance indicator. Authors who have incorporated this indicator into their study have done so from the point of view of growth, that is, growth from the sales of the partner companies of the alliances. In this regard, the authors Kumar (2008) and Stuart (2000) measure sales growth as the sum of sales of the two partners in the year end preceding the formation of the JV, while Kim et al. (2021) did so from the firm average annual sales growth over the past 2 years, Belderbos et al. (2004) uses the growth in the value of sales new to the market per employee in a 2-year period.

An indicator similar to *sales* that also measures the performance of the company is *turnover*. Although sometimes both indicators are used interchangeably, the indicators are slightly different. Sales show the total value of the products or services sold by the company, and turnover measures how much the company has sold through its products and services in a given period. In the study carried out by the author (Rosli, 2011) the indicator of total sales to measure the company's turnover is used, and he argues that the positive relationship between the JVs and turnovers of their partner companies are mainly influenced by the type of partner and the firm ownership structure. This author also states that the ownership structure is one of the specific characteristics of companies that most influences their performance.

Value creation can be interpreted from different perspectives. For example, the author (Merchant, 2001) defines value creation from the perspective of the shareholder, for whom it implies an increase in the company's future profits, while Belderbos et al. (2004) define it from the perspective of productivity, through the growth of value added per employee. Both authors agree that JVs have an effect on value creation and in addition, Belderbos et al. (2004) confirms that the type of partner with whom the company forms the alliance has a greater or lesser effect on each one of the productivity indicators identified. Moreover, the size of the company, as well as the type of partner, among others, influence this effect (Belderbos et al., 2004). According to these authors, cooperation between competitors and suppliers focuses on incremental innovations that improve firms' productivity performance, while university cooperation and cooperation between competitors are essential to create and bring radical innovations to the market, generating sales of products that are novel to the market and, therefore, improving firms' growth performance.

Productivity is the parameter that reflects the efficiency of the companies in the use of their inputs to produce their outputs. In this regard, Rosli (2011), has studied the effect of the alliances on the productivity of their partner companies from various approaches. He used indicators that represented the company's production, based on the volume of business and residual growth of a company's production that is not explained by the growth of the consumables, given the existing production technology. This author confirms the existence of various factors that contribute to such influence and the participation of a local or foreign partner contributes, to a greater or lesser degree, to the influence of the alliances on the productivity of their partner companies. Furthermore, he also added that the age of the partner company contributes positively to this influence.

Market Performance*,* is grouped into 3 groups of parameters: market, other financial performance parameters, and value creation.

Unlike the *market* parameter of financial performance, in the field of market performance, Kenny & Fahy (2011) refer to international market performance where two dimensions have been identified: company market place performance, measured by international market share and levels of customer satisfaction and retention, measured by what they felt was the firm's levels of customer satisfaction and retention.

Following with the previous authors, they also considered *other financial performance parameters*, to measure international market performance: average return of investment (ROI), turnover and pre-tax profitability (Kenny & Fahy, 2011). However, the study's main finding suggests that there is a positive relationship between a firm's network human capital resources and international market (Kenny & Fahy, 2011). Nonetheless, no support was found for any relationship between network resource combinations, information sharing and international performance (Kenny & Fahy, 2011).

Lastly, Juasrikul et al. (2018) adds that, the result of the *value creation* by the alliances in the field of market performance is estimated using market value creation measured by market reaction or stock price affected by the alliance announcement. They employed the Buy-and-Hold Abnormal Return indicator to capture relatively long-term performance (Juasrikul et al., 2018). In this value creation, cultural distance between partners had a negative influence, and the level of risks a positive influence (Juasrikul et al., 2018).

The **Innovation Performance** parameters are classified into 2 groups: organizational innovation and patents.

Organizational innovation studies the influence of the JVs with regard to the innovation in technology, processes, marketing, and in the organization in its entirety, of the partner companies. The authors Cui & O'connor (2012) measure innovation of the company based on the survey provided by *Fortune*. Furthermore, Cui & O'connor (2012) identify various factors that influence this business innovation: the diversity of resources it is capable of accessing, including the portfolio of alliances, management of the alliances and the market environment.

Finally, the *patents* parameter encompasses a large number of patents acquired in total and at an international level, and the change in performance in terms of patents of the partner companies. Accordingly, the majority of the authors use the indicator of the number of patents held by the company as a measurement of the innovation performance of partner companies. Authors Filiou & Golesorkhi (2016), Stuart (2000), Lin (2017) and Liu et al. (2022) estimate this, by adding the total number of patents held by the company; while authors Sivakumar et al. (2011) add the number of patents awarded or registered. The results obtained by these authors confirm that the alliances have an effect on their partner companies, and this effect may be positive or negative depending on certain features such as the diversity of partners (Sivakumar et al., 2011), portfolio of alliances (Lin, 2017) and its geographic diversity (Liu et al., 2022), equity investment (Lin, 2017; Liu et al., 2022; Sivakumar et al., 2011), firm age (Stuart, 2000), firm size (Filiou & Golesorkhi, 2016; Lin, 2017; Liu et al., 2022; Stuart, 2000), joint venture experience (Lin, 2017; Liu et al., 2022; Sivakumar et al., 2011), among others. For their part, authors Sivakumar et al. (2011) use the international patents indicator to show the level at which the partner

companies of alliances obtain patents at an international level. In keeping with the results obtained by the previous authors, these authors find a positive relationship when there is previous experience in alliances, while the diversity of partners has a negative relationship.

Within **Learning Performance**, we distinguished between 2 groups: learning capabilities and knowledge and resource transfer.

Learning capabilities are defined as the body of knowledge that includes both practical and theoretical knowledge, methods, procedures, experience and hardware (Mihailova, 2015). The authors Choi et al. (2020) and Mihailova (2015) agree in that the learning achievements must be evaluated at an operational level as changes in the functional types of technological and management capacities. To this statement, Choi et al. (2020) add that these changes must be linked to the strategic level results for the long-term modernization, restructuring and competitiveness. From the results obtained by Choi et al. (2020) they establish that the level of completeness of the alliance contract has an influence on the effect that the alliance or JV causes to the performance of the partner company, with the coordination between the parties being the mediator of that relationship. In this sense, Benavides-Espinosa & Roig-Dobón (2011) find that the existence of differences between the organizational cultures of the partners, develops cooperative learning. Although the greater the cultural differences the more difficult cooperative learning will be, when this obstacle has been overcome, results improve and the partner in the JV develop their capacity for learning.

Knowledge and resource transfer are another parameter for estimating learning performance, which is closely linked to learning capabilities and value creation. Knowledge transfer refers to the capacity of the company to transfer knowledge between the partners of the strategic alliance (Simonin, 2004). The author Simonin (2004) studies this capacity from the level of learning and assimilation and he analyzes items such as the level of learning and assimilation by the partner company on the technological know-how and processes of its partner, and the reduction of the technological dependence with regard to the partner. The results obtained from this author and similarly from the author Soh (2003) affirm that the intention of learning, as a driving force, and the ambiguity of knowledge, as a hindrance, emerges as one of the most significant determinants of the transfer of knowledge in the alliances, allowing for the development and reconfiguration of the potential for innovation, the development of new products or services and the response to market opportunities.
In turn, resource transfer refers to the supplementary or complementary resources accessed from alliances with different partners to create benefits above and beyond the benefits they create at the individual level alliance (Wassmer & Dussauge, 2011). In other words, firms have a sustainable competitive advantage and achieve superior performance when they possess a stock of valuable, rare, imperfectly imitable and non-substitutable resources (Wassmer & Dussauge, 2011).

In summary, there are several variables that can be used to study the influence of the Joint Venture on its partner company's performance. However, when authors have studied this effect, they mostly used indicators that allow for the analysis of financial performance from different perspectives (profitability, risk, value creation...). The found that Joint Ventures will influence financial performance to a greater or lesser extent, as well as the rest of the

performance, depending on prior strategic alliance experience, firm age, firm size, type of partner, firm ownership structure in the alliance, and others.

3. Suggestions and conclusion

We conducted an SLR on 27 articles published between 2000 and 2023 to examine the variables that measure the impact of Joint Ventures on the performance of their partner companies.

We found, on the one hand, that the main dimensions of performance studied in the literature through different methodologies, generally quantitative. Furthermore, the studies address these dimensions in companies located in different regions of the world, reflecting a global perspective of corporate performance. Although the level of relevance that each of the dimensions has in the analysis of the effect of JVs on their partner companies is not specified, the financial performance dimension is the one that most authors have applied to measure this effect, through regression analysis, in partner companies located all over the world.
On the other hand, the business characteristics, such as firm size, firm age, prior strategic alliance experience, ownership structure..., influence to a greater or lesser extent the performance of Joint Venture partner companies. Among these characteristics, they identified that ownership structure is one of the characteristics that most influences the performance of Joint Venture partner companies. Moreover, ownership structure is also defined as a legal right associated with ownership, where a higher equity shares will lead to a greater control. In turn, the greater the control, the less communication there will be between the parties and fewer opportunities for negotiation. However, when control is equal, there will be greater interaction between partners, although this may increase the costs associated with using the mechanisms necessary to alleviate coordination problems and conflicts between partners, and increase the organizational complexity of managing JVs.

Nevertheless, the studies reviewed do not specify the extent to the ownership structure of the JV portfolio of partner firms influences their performance being one of the most influential characteristics on performance. Therefore, a need for further research is identified in relation to joint venture partner performance where the portfolio of joint ventures of the same company includes minority, majority and/or 50-50 equity participation in joint ventures.

Moreover, it also identifies an opportunity to increase knowledge about the performance of the Joint Venture partner companies, studying the relationship between the result of one or more performance dimension/s with other/s dimension/s, for example, financial performance and market performance.

Finally, studies that have already been conducted on other types of firms could contribute more to the existing literature on JV partner firms. In particular, within the financial performance dimension, there are several studies on SMEs, non-SMEs..., on the relationship between the different indicators used to measure financial performance, such as the effect of leverage on the company's profitability. In the JV environment, this study would provide information on how the partnership characteristics identified in this study influence this relationship, and how they differ from other types of companies.

3.3. Implications of the study

This systematic literature review has revealed the research on the various variables to measure the effect involved in the development of the JV on its partner companies, as well as the business features that favor it.

Likewise, we reported on the need to broaden knowledge by going deeper into the lines of research currently existing in the field of JV partner companies, as well as using similar research currently being carried out in other types of companies, other than JV partner companies.

An empirical study into these fields will provide results that will help finance managers take more effective decisions.

3.4. Limitations of the study

Ultimately, this research has some limitations. This literature analysis has a bias in the selection of articles, due to the keywords used in this study. Future researchers could augment this list of keywords and check if the results vary from our analysis, for example, by including the word "effect". The sample is also limited to journal articles and papers written in English, excluding other types of papers such as book chapters or conference papers. In addition, the articles included in the study did not consider the effect that one dimension of performance has on another, nor the influence that the causal effect between two or more indicators of performance has on performance. Finally, we did not find any studies on the performance of JV partner companies that have more than one type of JV depending on their equity participation. Therefore, it would be interesting to be able to study these effects in future research, in order to increase knowledge in the field of JV partner firm performance.

Note

1. In this study will interchangeably use the concept of Strategic Alliances and Joint Venture

4. References

Albers, S., Wohlgezogen, F., & Zajac, E. J. (2016). Strategic Alliance Structures: An Organization Design Perspective. *Journal of Management*, *42*(3), 582–614.

Almarri, A. (2024). Impacts Of Strategic Partnership On Technological Transformation On Manufacturing Firms. *Texila International Journal of Management*, *10*(1), 76–84. https://doi.org/10.21522/tijmg.2015.10.01.art008

Arjun, T. P., & Subramanian, R. (2024). Defining and measuring financial literacy in the Indian context: a systematic literature review. *Managerial Finance*, *50*(7), 1247–1269. https://doi.org/10.1108/MF-08-2022-0358

Arora, A., Mishra, D., Amawate, V., & Panda, T. K. (2023). Joint Ventures: an integrative review and setting research agenda. *Academy of Marketing Studies Journal*, *27*(5).

Artisien, P. F. R., & Buckley, P. J. (1985). Joint Ventures in Yugoslavia: Opportunities and Constraints. *Journal of International Business Studies*, *16*(1), 111–135. www.jstor.org

Barney, J. (1991). Firm Resources and Sustained Competitive Advantage. *Journal of Management*, *17*(1), 99–120. https://doi.org/10.1177/014920639101700108

Beamish, P. (1988). *Multinational Joint Ventures in Developing Countries*. Routledge. https://www.routledge.com/Multinational-Joint-Ventures-in-Developing-Countries-RLE-International/Beamish/p/book/9781138007819

Beamish, P. W. (1985). *Joint venture performance in developing countries*. https://ir.lib.uwo.ca/digitizedtheses/1395

Beamish, P. W., & Banks, J. C. (1987). Equity Joint Ventures and the Theory of the Multinational Enterprise. *Journal of International Business Studies*, *18*(2), 1–16. https://doi.org/10.1057/palgrave.jibs.8490403

Beamish, P. W., & Lupton, N. C. (2009). Managing Joint Ventures. *Academy of Management Perspectives*, *23*(2), 75–94. https://doi.org/10.5465/amp.2009.39985542

Belderbos, R., Carree, M., & Lokshin, B. (2004). Cooperative R&D and firm performance. *Research Policy*, *33*(10), 1477–1492. https://doi.org/10.1016/j.respol.2004.07.003

Benavides-Espinosa, M. del M., & Roig-Dobón, S. (2011). The influence of cultural differences in cooperative learning through joint ventures. *Service Business*, *5*(1), 69–85. https://doi.org/10.1007/s11628-011-0102-1

Choi, C.-B., & Beamish, P. W. (2004). Split management control and international joint venture performance. *Journal of International Business Studies*, *35*(3), 201–215. https://doi.org/10.1057/palgrave.jibs.8400078

Choi, Y. R., Phan, P. H., & Choi, J. (2020). Formal governance, interfirm coordination, and performance in partnerships: An empirical investigation of a mediation model. *European Management Journal*, *38*(3), 413–424. https://doi.org/10.1016/j.emj.2019.12.005

Chowdhury, J. (1992). Performance of International Joint Ventures and Wholly Owned Foreign Subsidiaries: A Comparative Perspective. *Management International Review*, *32*(2), 115–133. http://about.jstor.org/terms

Cui, A. S., & O'connor, G. (2012). Alliance Portfolio Resource Diversity and Firm Innovation. *Journal of Marketing*, *76*, 1547–7185.

Demirbag, M., & Mirza, H. (2000). Factors affecting international joint venture success: an empirical analysis of foreign–local partner relationships and performance in joint ventures in Turkey. *International Business Review*, *9*(1), 1–35. https://doi.org/10.1016/S0969-5931(99)00027-X

Dewally, M., & Gordon, R. (2022). Financial impact of partnerships on hospitality firms. *Annals of Tourism Research*, *95*. https://doi.org/10.1016/j.annals.2022.103435

Dussauge, P., Garrette, B., & Mitchell, W. (2004). Asymmetric performance: The market share impact of scale and link alliances in the global auto industry. *Strategic Management Journal*, *25*(7), 701–711. https://doi.org/10.1002/smj.416

Emami, A., Welsh, D. H. B., Davari, A., & Rezazadeh, A. (2022). Examining the relationship between strategic alliances and the performance of small entrepreneurial firms in telecommunications. *International Entrepreneurship and Management Journal*, *18*(2), 637–662. https://doi.org/10.1007/s11365-021-00781-3

Filiou, D., & Golesorkhi, S. (2016). Influence of Institutional Differences on Firm Innovation from International Alliances. *Long Range Planning*, *49*(1), 129–144. https://doi.org/10.1016/j.lrp.2014.09.005

Franco-Santos, M., Lucianetti, L., & Bourne, M. (2012). Contemporary performance measurement systems: A review of their consequences and a framework for research. *Management Accounting Research*, *23*(2), 79–119.

García Canal, E. (1992). La cooperación interempresarial en España: Características de los acuerdos de Cooperación suscritos entre 1986 y1989. *Economía Industrial*, *286*, 113–122.

Gomes-Casseres, B. (1987). Joint Venture Instability: Is It a Problem? *Journal of World Business: JWB*, *22*(2), 97.

Gomes-Casseres, B. (1989). Ownership structures of foreign subsidiaries. *Journal of Economic Behavior & Organization*, *11*(1), 1–25. https://doi.org/10.1016/0167-2681(89)90061-9

Graña-Alvarez, R., Lopez-Valeiras, E., Gonzalez-Loureiro, M., & Coronado, F. (2024). Financial literacy in SMEs: A systematic literature review and a framework for further inquiry. *Journal of Small Business Management*, *62*(1), 331–380. https://doi.org/10.1080/00472778.2022.2051176

Grant, R. M. (1999). The Resource-Based Theory of Competitive Advantage: Implications for Strategy Formulation. *California Management Review*, *33*(3), 3–23. https://doi.org/10.2307/41166664

Gulati, R. (1998). Alliances and Networks. *Strategic Management Journal*, *19*(4), 293–317.

Huang, M. C., Hsiung, H. H., & Lu, T. C. (2015). Reexamining the relationship between control mechanisms and international joint venture performance: The mediating roles of perceived value gap and information asymmetry. *Asia Pacific Management Review*, *20*(1), 32–43. https://doi.org/10.1016/j.apmrv.2014.12.004

Hubbard, T. D., Pollock, T. G., Pfarrer, M. D., & Rindova, V. P. (2018). Safe Bets or Hot Hands? How Status and Celebrity Influence Strategic Alliance Formations by Newly Public Firms. *Academy of Management Journal*, *61*(5), 1976–1999. https://doi.org/10.5465/amj.2016.0438

Ireland, R. D., Hitt, M. A., & Vaidyanath, D. (2002). Alliance Management as a Source of Competitive Advantage. *Journal of Management*, *28*(3), 413–446. https://doi.org/10.1016/S0149-2063(02)00134-4

Jiang, X., & Li, Y. (2008). The relationship between organizational learning and firms' financial performance in strategic alliances: A contingency approach. *Journal of World Business*, *43*(3), 365–379. https://doi.org/10.1016/j.jwb.2007.11.003

Juasrikul, S., Sahaym, A., Yim, H. (Sean), & Liu, R. L. (2018). Do cross-border alliances with MNEs from developed economies create firm value for MNEs from emerging economies? *Journal of Business Research*, *93*, 98–110. https://doi.org/10.1016/j.jbusres.2018.07.001

Kenny, B., & Fahy, J. (2011). Smes' networking capability and international performance. In *Advances in Business Marketing and Purchasing* (Vol. 17, pp. 199–376). https://doi.org/10.1108/S1069-0964(2011)0000017006

Kim, C. Y., Seo, E. H., Booranabanyat, C., & Kim, K. (2021). Effects of emerging-economy firms' knowledge acquisition from an advanced international joint venture partner on their financial performance based on the open innovation perspective. *Journal of Open Innovation: Technology, Market, and Complexity*, *7*(1), 1–21. https://doi.org/10.3390/joitmc7010067

Kim, H.-S., & Choi, S.-Y. (2014). Corporate performance drivers in vertical downstream alliance portfolios: The Korean defense industry. *Journal of Management and Organization*, *20*(2), 148–164. https://doi.org/10.1017/jmo.2014.30

Kogut, B. (1988). Joint ventures: Theoretical and empirical perspectives. *Strategic Management Journal*, *9*(4), 319–332. https://doi.org/10.1002/smj.4250090403

Kumar, M. V. S. (2008). Value Creation in Joint Venture Dyads. *Advances in Mergers and Acquisitions*, *7*, 29–50. https://doi.org/10.1016/S1479-361X(08)07003-8

Kumpulainen, M., & Seppänen, M. (2022). Combining Web of Science and Scopus datasets in citation-based literature study. *Scientometrics*, *127*(10), 5613–5631. https://doi.org/10.1007/s11192-022-04475-7

Levi, R., Perakis, G., Shi, C., & Sun, W. (2020). Strategic Capacity Planning Problems in Revenue-Sharing Joint Ventures. *Production and Operations Management*, *29*(3), 664–687. https://doi.org/10.1111/poms.13128

Lin, J. Y. (2017). Knowledge creation through joint venture investments: The contingent role of organizational slack. *Journal of Engineering and Technology Management - JET-M*, *46*, 1–25. https://doi.org/10.1016/j.jengtecman.2017.09.001

Liu, C. H. S., Lin, J. Y., & Chou, S. F. (2022). Wielding a double-edged sword? JV investment geographic diversity and parent's innovation. *Review of Managerial Science*, *16*(6), 1783–1816. https://doi.org/10.1007/s11846-021-00493-6

Liu, X., Vredenburg, H., & Daellenbach, U. (2019). The moderating effect of corporate reputation on inter-firm alliance impact on company performance. *European Business Review*, *31*(4), 524–543. https://doi.org/10.1108/EBR-12-2017-0232

Lu, J. W., & Beamish, P. W. (2001). The internationalization and performance of SMEs. *Strategic Management Journal*, *22*(6–7), 565–586. https://doi.org/10.1002/smj.184

Majocchi, A., Mayrhofer, U., & Camps, J. (2013). Joint ventures or non-equity alliances? Evidence from Italian firms. *Management Decision*, *51*(2), 380–395. https://doi.org/10.1108/00251741311301876

Makino, S., & Beamish, P. W. (1998). Performance and Survival of Joint Ventures with Non-Conventional Ownership Structures. *Journal of International Business Studies*, *29*(4), 797–818. https://doi.org/10.1057/palgrave.jibs.8490054

Merchant, H. (2001). International Joint Ventures and Shareholder Value Creation: Evidence from Manufacturing and Non-manufacturing Sectors Hemant Merchant. *Vikalpa The Journal for Decision Makers*, *26*(4), 21–34. https://doi.org/10.1177/0256090920010403

Merchant, H. (2004). Revisiting Shareholder Value Creation via International Joint Ventures: Examining Interactions Among Firm-and Context-Specific Variables. *Canadian Journal of*

Administrative Sciences, *21*(2), 129–145. https://doi.org/10.1111/j.1936-4490.2004.tb00329.x

Mihailova, I. (2015). Outcomes of learning through JVs for local parent firms in transition economies: Evidence from Russia. *Journal of World Business*, *50*(1), 220–233. https://doi.org/10.1016/j.jwb.2014.04.004

Nakamura, A., & Nakamura, M. (2004). Firm performance, knowledge transfer and international joint ventures. In *Int. J. Technology Management* (Vol. 27, Issue 8). www.CareerOwl.ca

O'Dwyer, M., & Gilmore, A. (2018). Value and alliance capability and the formation of strategic alliances in SMEs: The impact of customer orientation and resource optimisation. *Journal of Business Research*, *87*, 58–68. https://doi.org/10.1016/j.jbusres.2018.02.020

Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., … Moher, D. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. In *The BMJ* (Vol. 372). BMJ Publishing Group. https://doi.org/10.1136/bmj.n71

Panico, C. (2017). Strategic interaction in alliances. *Strategic Management Journal*, *38*(8), 1646–1667. https://doi.org/10.1002/smj.2610

Park, B. (2011). Knowledge transfer capacity of multinational enterprises and technology acquisition in international joint ventures. *International Business Review*, *20*(1), 75–87. https://doi.org/10.1016/j.ibusrev.2010.06.002

Parmigiani, A., & Rivera-Santos, M. (2011). Clearing a Path Through the Forest: A Meta-Review of Interorganizational Relationships. *Journal of Management*, *37*(4), 1108–1136. http://ssrn.com/abstract=1906646Electroniccopyavailableat:http://ssrn.com/abstract=1906646

Rosli, M. (2011). Determinants of small and medium enterprises performance in the Malaysian auto-parts industry. *African Journal of Business Management*, *5*(20), 8235–8241. https://doi.org/10.5897/ajbm11.889

Salamah, S. N. (2023). Financial Management Strategies to Improve Business Performance. *Journal of Contemporary Administration and Management (ADMAN)*, *1*(1), 9–12. https://doi.org/10.61100/adman.v1i1.3

Siddaway, A. P., Wood, A. M., & Hedges, L. V. (2019). How to Do a Systematic Review: A Best Practice Guide for Conducting and Reporting Narrative Reviews, Meta-Analyses, and Meta-Syntheses. *Annual Review of Psychology*, *70*(1), 747–770. https://doi.org/10.1146/annurev-psych-010418-102803

Simonin, B. L. (2004). An empirical investigation of the process of knowledge transfer in international strategic alliances. *Journal of International Business Studies*, *35*(5), 407–427. https://doi.org/10.1057/palgrave.jibs.8400091

Sivakumar, K., Roy, S., Zhu, J. J., & Hanvanich, S. (2011). Global innovation generation and financial performance in business-to-business relationships: The case of cross-border

alliances in the pharmaceutical industry. *Journal of the Academy of Marketing Science*, *39*(5), 757–776. https://doi.org/10.1007/s11747-010-0229-y

Soh, P. H. (2003). The role of networking alliances in information acquisition and its implications for new product performance. *Journal of Business Venturing*, *18*(6), 727–744. https://doi.org/10.1016/S0883-9026(03)00026-0

Stefanovic, D., Havzi, S., Nikolic, D., Dakic, D., & Lolic, T. (2021). Analysis of the Tools to Support Systematic Literature Review in Software Engineering. *IOP Conference Series: Materials Science and Engineering*, *1163*(1), 012013. https://doi.org/10.1088/1757-899X/1163/1/012013

Stuart, T. E. (2000). Interorganizational alliances and the performance of firms: A study of growth and innovation rates in a high-technology industry. *Strategic Management Journal*, *21*(8), 791–811. https://doi.org/10.1002/1097-0266(200008)21:8<791::AID-SMJ121>3.0.CO;2-K

Tranfield, D., Denyer, D., & Smart, P. (2003). Towards a Methodology for Developing Evidence-Informed Management Knowledge by Means of Systematic Review. *British Journal of Management*, *14*(3), 207–222. https://doi.org/10.1111/1467-8551.00375

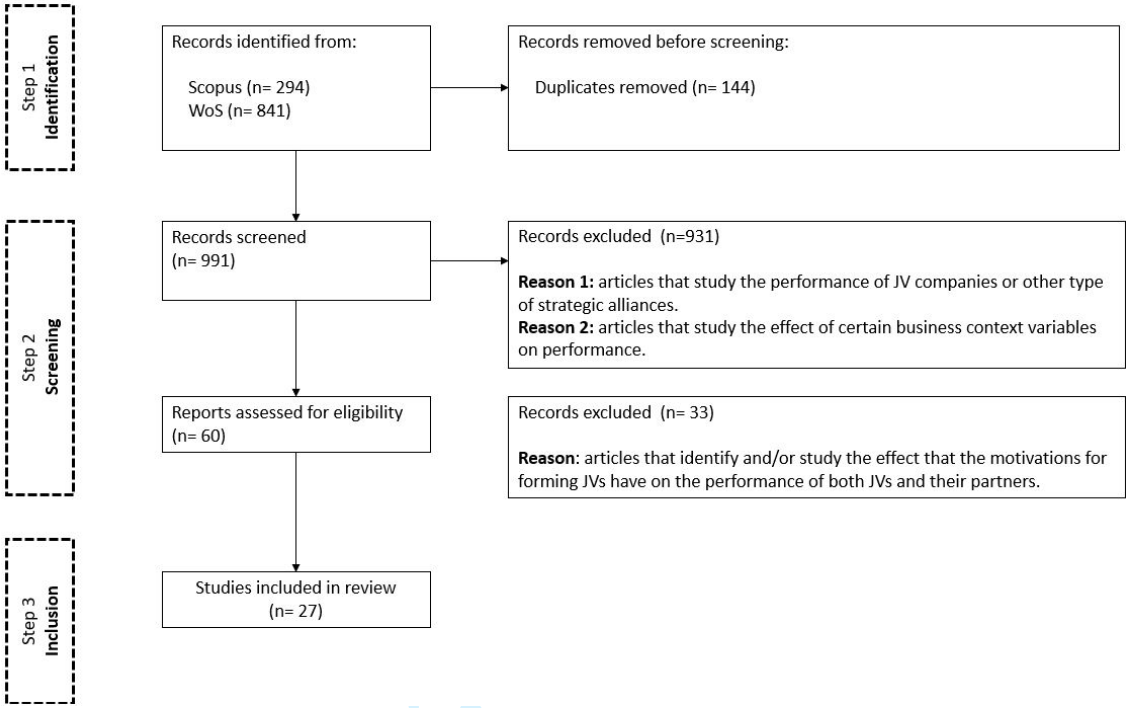
Velez-Calle, A. (2020). Exploring instances of deviation in joint ventures between partners' equity share and board representation. *International Journal of Organizational Analysis*, *28*(1), 260–273. https://doi.org/10.1108/IJOA-11-2018-1598

Wassmer, U., & Dussauge, P. (2011). Value creation in alliance portfolios: The benefits and costs of network resource interdependencies. *European Management Review*, *8*(1), 47–64. https://doi.org/10.1111/j.1740-4762.2011.01003.x

Woodcock, C. P., Beamish, P. W., & Makino, S. (1994). Ownership-Based Entry Mode Strategies and International Performance. *Journal of International Business Studies*, *25*(2), 253–273. https://doi.org/10.1057/palgrave.jibs.8490200

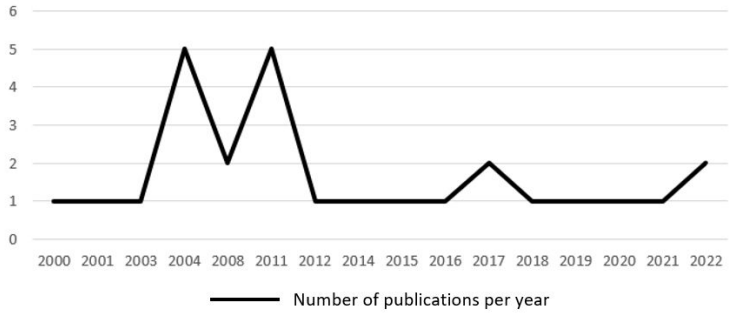
Zambuto, F., Lo Nigro, G., & O'Brien, J. P. (2017). The Importance of Alliances in Firm Capital Structure Decisions: Evidence from Biotechnology Firms. *Managerial and Decision Economics*, *38*(1), 3–18. https://doi.org/10.1002/mde.2735

Figure 1. Data screening process



Source(s): Author's own creation

Figure 2. Annual JV partner performance publications (2000-2023)



Source(s): Author's own creation

Table I. Performance dimensions analyzed in the published articles

Performance dimension	Number of articles
Innovation and financial	1
Innovation	7
Financial	13
Market	2
Learning	4

Source(s): Author's own creation

Table II. Performance measurement indicators according to its dimension

Dimension	Parameter group	Frequency	Authors
Financial performance	Leverage	1	Zambuto et al. (2017)
	Market	3	Dussauge et al. (2004), Liu et al. (2022), Rosli (2011),
	Profitability	5	Dewally & Gordon (2022), Kim et al. (2021), Merchant (2004), Nakamura & Nakamura (2004), Sivakumar et al. (2011),
	Revenue	1	Kim & Choi (2014)
	Financial risk	1	Dewally & Gordon (2022)
	Sales	4	Belderbos et al. (2004), Kim et al. (2021), Kumar (2008), Stuart (2000),
	Turnover	1	Rosli (2011)
	Value creation	2	Belderbos et al. (2004), Merchant (2001),
	Productivity	1	Rosli (2011)
Market performance	Market	1	Kenny & Fahy (2011), Soh (2003)
	Value creation	1	Juasrikul et al. (2018)
	Other financial parameters	1	Kenny & Fahy (2011)
Innovation performance	Organizational innovation	1	Cui & O'connor (2012)
	Patents	5	Filiou & Golesorkhi (2016), Liu et al. (2022), Lin (2017), Sivakumar et al. (2011), Stuart (2000)
Learning performance	Learning capabilities	3	Choi et al. (2020), Benavides-Espinosa & Roig-Dobón (2011), Mihailova (2015),
	Knowledge and resource transfer	2	Simonin (2004), Wassmer & Dussauge (2011)

Source(s): Author's own creation